John Adams Library.

IN THE CUSTODY OF THE
BOSTON PUBLIC LIBRARY.

SHELF No.
ADAMS
201.5

Pietr Berelin Cort.

L. du Guernier Sc.

T. LUCRETIUS CARUS

OF THE

NATURE of *THINGS*,

IN SIX BOOKS.

ILLUSTRATED with

Proper and Useful NOTES.

Adorned with COPPER-PLATES,

Curiously ENGRAVED

By *GUERNIER*, and others.

Carmina sublimis *tunc sunt peritura* Lucretî
Exitio Terras cum dabit una Dies. OVID.

IN TWO VOLUMES.

LONDON:
Printed for DANIEL BROWNE, at the *Black Swan* without *Temple-Bar*.
MDCCXLIII.

220

ADAMS 22.1.5

THE

PREFACE.

THE only Tranſlation in Engliſh of this Poem was executed many Years ago by Mr. *Creech:* The World was pleaſed with the Performance, and received it with the Applauſe it deſerved; they ſaw an Author exceedingly crabbed and abſtruſe, delightfully opened, ſet off with great Learning, and ſweeten'd with the Charms of Poetry. An Author (as *Quintilian* allows him) elegant in his kind, curious and exact in his Images, happy in diſpoſing his Materials, flowing even to Satiety in Inſtances of a brisk and ready Wit, pointed in his Satire, ſevere in

Reflections, grave in Precepts, quick and vivacious in his Diſcourſes, and every way fitted for his bold Attempt.

THESE Excellencies made him extremely difficult to be followed. The learned *Caſaubon* declares it impoſſible; Mr. *Evelyn*, who tranſlated the firſt Book, found it a very diſcouraging Task, and left off. He ſays himſelf,

——*Perſuaded that there was rich Ore,*
I boldly launch'd, and would new Worlds explore;
Deep Mines I ſaw, and hidden Wealth to lie
In Rocky Entrails, and Sierra's *high.*
I ſaw a fruitful Soil, by none yet trod,
Reſerv'd for Heroes, or ſome Demi-God;
And urg'd my Fortune on;——
Till rugged Billows, and a dangerous Coaſt,
My vent'rous Bark and raſh Attempt had croſt;
When landing, unknown Paths, and hard Acceſs
Made me deſpond of pre-conceiv'd Succeſs;

I turn'd my Prow, and the Diſcovery made,
But was too weak, too poor myſelf to trade,
Much leſs to make a Conqueſt;——

And I believe any one who will be pleaſed to oblige the World with another, and more correct Verſion, will be ſufficiently convinced of the Difficulty.

THE Matter of this Poem muſt be confeſſed to be rugged, ſubtle, and ſtubborn; and every Compoſition of this kind is like a Landſcape, where craggy Mountains and broken Walls are intermixed with fair Meadows and ſmooth Streams. Our Language (as Sir *Henry Wotton* obſerves) runs out into Froth and Bubble, is copious in Complement, and in Love-Expreſſions, but very narrow and barren in Terms of Art, and Phraſes ſuited to Philoſophy; and thoſe Technical Words we have, move coarſely and cloudily in Verſe. For theſe Reaſons, the Poetical Tranſlation of *Lucretius* is often more perplexed and harſh than the Original; it is, in many Places, a wide and rambling Para-

phraſe; in others Mr. *Creech* contracts and curtails his Author, and is frequently guilty of Omiſſions for many Lines together, tho' his Numbers flow ſweetly as he goes, and charm you irreſiſtibly. This is no wonder; for the Poet he undertook is not to be confined and ſhackled by the Rules of Rhyme; his Verſe is neareſt, and runs more naturally into Proſe than any other, *Juvenal* and *Horace* only excepted, among all the Claſſicks. I have endeavoured (becauſe diſencumber'd from the Fetters of Poetry) faithfully to diſcloſe his Meaning in his own Terms, and to ſhew him whole and intire; I have followed the different Readings and Explications of the beſt Expoſitors, but whether agreeable to the Mind of the Author or no, Compariſon only can diſcover.

And here I would have it be underſtood, that I tranſlate *Lucretius* only as a Claſſick Writer of the firſt Rank, and one of the Venerable Fathers of *Latin* Poetry, without thinking myſelf accountable for his Principles, or juſtifying his Syſtem; and whoever apprehends the Deſign of this Work, in any other View, is a Perſon of narrow

narrow and ſtinted Conceptions; he is a preciſe *Fanatick* in the Republick of Letters, and a ſecret and ignorant Enemy to Human Learning. It would make ſtrange Havock in the Learned World, if a Tranſlator who renders a Pagan Author, or a Tutor that explains an old Claſſick to his Pupils, ſhould be judged to cultivate and defend all the Folly and Impiety of the Heathen Mythology: This would ſoon baniſh thoſe great Founders of Knowledge and polite Literature out of all Methods of Education, and introduce Barbariſm and Ignorance equal to that of the *Goths* and *Vandals*, upon the Ruins of every thing that is now called Noble, Generous and Inſtructive, by the wiſeſt and the moſt ſenſible Part of Mankind.

Besides, Books that treat of Subjects naturally ſo obſcure and intricate as are many of thoſe of which *Lucretius* diſputes, cannot be turned into our Language in ſuch a manner, as by a bare Tranſlation only to make them intelligible to a Reader merely *Engliſh*, and that has no Knowledge of the Languages in which the Originals were com-

poſed: for the Terms, tho' dark and difficult, muſt neceſſarily be retained, and by Conſequence their Force cannot be apprehended by Perſons of vulgar Abilities, and of low Learning.

BUT if I ſhould ſtill fall under Cenſure for beſtowing ſo much Time and Labour upon an impious Poet; upon *Lucretius*, who believes and endeavours to prove the Mortality and Corporiety of the human Soul, who denies a future State, and laughs at Providence, who defends the Atheiſtical Hypotheſis of *Democritus* and *Epicurus*, concerning the Indiviſible Principles, and the Nature of Things: In Anſwer to this heavy Charge, not to mention, that for the ſame Reaſon we ought to baniſh from our Studies the moſt celebrated Authors of Antiquity, ſince their Writings are in many Places profane, impious, fabulous, falſe and ridiculous; ſo that all our Poets, Orators, Hiſtorians, and Philoſophers muſt be avoided and thrown away as Debauchers of Youth, and Corrupters of Manners, if their Writings were once to be tried by the Standard of Faith, and the Doctrines of Chriſtianity:

Not

Not to inſiſt upon this, I will boldly venture to ſay, that whatever Propoſitions *Lucretius* advances contrary to our Religion are ſo viſibly and notoriouſly falſe, and conſequently ſo eaſy to be anſwered, that they cannot ſhake or ſtagger any one's Faith that can give a Reaſon for his Belief. What Danger can any Man apprehend, while he reads that ridiculous Doctrine of the *Epicurean* Philoſophers, concerning their Atoms, or minute indiviſible Corpuſcles, which they held to be the firſt Principles of all Things? An Opinion ſo abſurd, that only to mention it is to confute it. When the Poet thinks he has fully demonſtrated the Corporality of the Human Soul, and brings no leſs than ſix and twenty Arguments to prove its Mortality, upon full Conſideration they appear of ſo little Force, and ſo obvious to be confuted, that ſo far from confounding a Chriſtian's Faith, no Man, but of ordinary Capacity, can, upon ſo ſlender and unconvincing Proofs, believe, if he would, that the Soul dies with the Body; nor are his Arguments, by which he labours to overthrow the Belief of a Divine Providence, and to wreſt the Power of Creation out of the

Hands

Hands of Omnipotence, more cogent or perſuaſive. And what Chriſtian will not be pleaſed to obſerve, that not even the moſt piercing Wit of *Lucretius* has been able to advance any Thing ſolid againſt the Power of that infinite God whom he adores; eſpecially conſidering, if any ſuch Impieties could have been defended, he was certainly capable of defending them.

———*Si Pergama dextrâ*
Defendi poſſent certè *hâc defenſa fuiſſent.*
VIRG.

NOT that we are to ſuppoſe, that whatever *Lucretius* writ was impious, falſe or ridiculous; ſo far from that, many excellent Things are contained in his Poem, many that deſerve to be well read and remember'd by the beſt of Chriſtians. How excellently does he declaim againſt Ambition, Injuſtice and Cruelty? againſt Superſtition, and the Fear of Death? againſt Avarice, Luxury, and Luſt? and the diſorder'd Paſſions of the Mind, and diſhoneſt Pleaſures of the Body? Is he not ever exhorting his *Memmius* to Sobriety, Temperance, Chaſtity,

ſtity, and Magnanimity? Inſomuch, that what *Diogenes* writes of *Epicurus* ſeems to be true, that he was falſely accuſed of indulging himſelf too much in Pleaſure, and that it was a mere Calumny to wreſt to a wrong Senſe the Meaning of that Philoſopher, and to interpret what he ſaid of the Tranquillity of the Mind, as if it had been ſpoken of the ſenſual Delights of the Body. *Galen* repreſents this Philoſopher as a Perſon of conſummate Virtue and Continence, that exclaimed conſtantly againſt the Uſe of Venereal Actions, that neglected the Advantages of Life, and contemned all Daintineſs and Exceſs, in Eating, Drinking and Apparel, and would often ſay, *That Bread and Water in time of Want afforded the greateſt Pleaſure.* Thus lived *Epicurus*, whoſe very Name nevertheleſs has, for many Ages, been uſed as a Proverb, to mark out an atheiſtical, voluptuous Wretch, addicted to all manner of Senſuality. Thus too lived his Followers, who nevertheleſs are called impious Libertines, and repreſented as a Herd of Swine, indulging themſelves in Pleaſure, and wallowing in all manner of Impurities.

——*Epicuri de grege Porci.* HOR.

I SHALL conclude upon this Occaſion, with the Character of *Lucretius*, and his excellent Poem, given by *Dionyſius Lambinus*, in his Epiſtle Dedicatory to *Charles* IX. the moſt Chriſtian King.

'THE Poem of *Lucretius*, tho' he ad-
'vances in it ſome Opinions that are repug-
'nant to our Religion, is nevertheleſs a Poem,
'nay, and a beautiful noble Poem too, di-
'ſtinguiſhed, illuſtrated and adorned with all
'the Brightneſs of Wit and Fancy. What
'tho' *Epicurus* and *Lucretius* were impious,
'are we who read them therefore impious
'too? How many Aſſertions are there in
'this Poem that are agreeable to the Opi-
'nions and Maxims of other Philoſophers?
'How many probable? how many excellent,
'and almoſt Divine? Theſe let us lay hold
'on, theſe let us ſeize, theſe let us approve
'of. —— Beſides, are we ſo credulous as to
'believe, that what Aſſertions ſoever all
'manner of Writers have left recorded in
'their Works, are as true, as if they had been
'pronounced from the Oracle of *Apollo*?
'And ſince we daily read many Things that

'are

'are fabulous, incredible and falſe, either to 'give ſome Reſpite to our Minds, or to make 'us the more willingly acquieſce in, and the 'more conſtantly to adhere to ſuch as are in-'diſputably true, what reaſon is there that 'we ſhould contemn *Lucretius*, a moſt ele-'gant and beautiful Poet, the moſt polite, 'and the moſt ancient of all the *Latin* Wri-'ters, from whom *Virgil* and *Horace* have 'in many Places borrowed not half, but 'whole Verſes? He, when he diſputes of the 'indiviſible Corpuſcles or firſt Principles of 'Things, of their Motion, and of their va-'rious Figuration, of the Void, of the Ima-'ges, or tenuious Membranes that fly off from 'the Surface of all Bodies, of the Nature of 'the Mind and Soul, of the Riſing and Set-'ting of the Planets, of the Eclipſe of the 'Sun and Moon, of the Nature of Light-'ning, of the Rainbow, of the Cauſes of 'Diſeaſes, and of many other Things, is 'learned, witty, judicious and elegant. In 'the Introductions to his Books, in his Com-'pariſons, in his Examples, in his Diſputa-'tions againſt the Fear of Death, concerning 'the Inconveniencies and the Harms of Love, 'of Sleep, and of Dreams, he is copious, 'diſcreet,

'discreet, eloquent, knowing and sublime; 'we not only read *Homer*, but even get him 'by heart, because under the Veil of Fables, 'partly obscene and partly absurd, he has in 'a manner included the Knowledge of all 'natural and human Things. Shall we not 'then hear *Lucretius*, who, without the 'Disguise of Fables, and such Trifles, not 'truly indeed, nor piously, but plainly and 'openly, and as an *Epicurean*, ingeniously, 'wittily and learnedly, and in the most cor-'rect and purest of Styles, disputes of the 'Principles, and Causes of Things, of the 'Universe, of the Parts of the World, of a 'happy Life, and of Things Celestial and 'Terrestrial? And tho' in many Places he 'dissents from *Plato*, tho' he advances ma-'ny Assertions that are repugnant to our Re-'ligion, we ought not therefore to despise 'and set at nought those Opinions of his, in 'which not only the ancient Philosophers, 'but we, who profess Christianity, agree with 'him. How admirably does he dispute of 'the restraining of Pleasures, of the bridling 'of Passions, and of the attaining Tranquil-'lity of Mind? How wittily does he rebuke 'and confute those who affirm that nothing

'can

'can be perceived, and nothing known? and 'who say that the Senses are fallacious? How 'fully he defends the Certainty of Sense? 'How beautiful are his Descriptions? How 'graceful, as the *Greeks* call them, are his 'Episodes? How fine are his Descriptions of 'Colours, of Mirrours, of the Loadstone, 'and of the *Averni?* How serious and aw-'ful are his Exhortations to live continently, 'justly, temperately, and innocently? What 'shall we say of his *Diction*, than which no-'thing can be said or imagined more pure, 'more correct, more clear, or more elegant. 'I make not the least Scruple to affirm, that 'in all the *Latin* Tongue, no Author speaks '*Latin* better than *Lucretius*, and that the '*Diction*, neither of *Cicero*, nor of *Cæsar*, 'is more pure.'

THE Notes that attend this Translation are sufficient, I think, to explain the Text to those, who are properly qualified to read this Work; and to such who are not so, a more copious and particular Comment could be of no use.

THE

THE LIFE OF *LUCRETIUS.*

WE have few Materials left from whence to collect the proper Circumstances that relate to the Life of *Lucretius*; we are assured by his own Testimony, that he was a *Roman*, and born at *Rome*: His very Name directs us to the noble and ancient Family of the *Lucretii*, which being divided into many Branches,

comprehended under it, the *Tricipetini*, the *Cinnæ*, the *Veſpillones*, the *Triones*, the *Offelli*, and the *Galli*, and gave to *Rome* many Conſuls, Tribunes and Prætors, who were the great Supports and Ornaments of the Commonwealth.

HE was born, according to the Chronicle of *Euſebius*, about the ſecond Year of the hundred and ſeventy firſt Olympiad, in the Conſulſhip of *Lucius Licinius Craſſus*, and *Quintus Mutius Scævola*, about the ſix hundred and fifty eighth Year of *Rome*, twelve Years after *Cicero*. His Name was *Titus Lucretius Carus*; *Carus* was a *Roman* Surname, of which *Ovid* and many others make mention; but we no where find how it came to be given to *Lucretius*. It is not improbable it was conferred upon him either on account of his excellent and ſprightly Wit, his Affability and Sweetneſs of Temper and Manners, or for ſome other like endearing Qualities, that render'd him agreeable to thoſe with whom he converſed. He was ſent young to *Athens*, where at that time the *Epicurean* Philoſophy was in great Reputation. He ſtudied under *Zeno*, who

who had the Direction of the Gardens at that time, and was the Honour of the *Epicurean* Sect. *Phædrus* was another of his Masters, whom *Cicero* mentions as a Person of the greatest Humanity. These were the Preceptors of *Lucretius*, as they were likewise of *Pomponius Atticus*, *Memmius*, *Cassius*, and many others, who in that Age render'd themselves very illustrious in the Republick of *Rome*. How he spent his Time at *Athens*, how studiously he improved it, let his Poem be Witness. That he fitted himself for the best Company, is evident by what *Cornelius Nepos* tells us of the great Intimacy between him, *Pomponius Atticus*, and *Memmius*: And no doubt but he was intimate likewise with *Tully* and his Brother, who make such honourable Mention of him. If we look into his Morals, we may discover him to be a Man suitable to the *Epicurean* Principles, dissolved in Ease and Pleasure, flying publick Employments as a Derogation to Wisdom, and a Disturber of Peace and Quietness, and avoiding those distracting Cares which he imagined would make Heaven itself uneasy.

THE Accounts that remain of this Poet ſtop ſhort here, and no more is to be found concerning him till we come to his Death; yet it is difficult to find in what manner he died, nor is it much eaſier to determine in what Year of his Life his Death happened. Some make him die on the very Day *Virgil* was born, but this is an ingenious Fiction, founded only upon this, that *Virgil* aſſumed the *Toga Virilis* on the ſame Day that *Lucretius* died.

THE Chronicle of *Euſebius* obſerves, that he died by his own Hands in the forty fourth Year of his Age, being made diſtracted by a Philtre, which either his Miſtreſs or his Wife *Lucilia* (for ſo ſome call her, tho' without Authority) in a Fit of Jealouſy had given him; not with a Deſign to deprive him of his Senſes, or to take away his Life, but only to increaſe the Paſſion of his Love. *Donatus*, or whoever was the Author of the Life of *Virgil*, that goes under his Name, writes, that he died three Years before, when *Pompey* the Great and *M. Licinius Craſſus* were both of them the ſecond time Conſuls.

Others,

Others, who allow that having loſt his Senſes, he laid violent Hands on his own Life, yet place his Death in the twenty ſixth Year of his Age, and believe that his Madneſs proceeded from the Cares and Melancholy that oppreſſed him on account of the Baniſhment of his beloved *Memmius*; to which others again add likewiſe another Cauſe, the fatal Calamities under which his Country then laboured. And indeed it is certain, that *Lucretius*, a few Years before his Death, was an Eye-witneſs of the wild Adminiſtration of Affairs in the Days of *Clodius* and *Catiline*, who gave ſuch a Blow to the Republick of *Rome*, as not long after occaſioned its total Subverſion.

IT is wonderful that this admirable Poem of *Lucretius* ſhould be compoſed in the time of his Diſtraction. His ſix Books of his *Epicurean* Philoſophy, ſays *Euſebius*, were written in his lucid Intervals, when the Strength of Nature had thrown off all the diſturbing Particles, and his Mind, as it is obſerved of Madmen, was ſprightly and vigorous. Then, in a Poetical Rapture, he could fly with his *Epicurus* beyond the flaming

ming Limits of this World, frame and diſſolve Seas and Heavens in an inſtant, and by ſome unnuſual Sallies be the ſtrongeſt Argument of his own Opinion; for it ſeems impoſſible that ſome Things which he delivers ſhould proceed from Reaſon and Judgment, or from any other Cauſe but Chance and unthinking Fortune.

AFTER his Death, *Cicero*, as *Euſebius* witneſſes, reviſed and corrected his Writings. *Lambinus* contradicts this, but the Arguments he brings againſt the Aſſertion of *Euſebius* are but weak and of ſmall force.

A NEW

TRANSLATION

OF

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE ARGUMENT OF THE FIRST BOOK.

LUCRETIUS *has disposed his Poem in an excellent Method, and Order shines throughout the whole. He begins with an Invocation to* Venus, *the common natural Appetite to Procreation, and gives her all her Titles, as if really he expected some Assistance from her. He then dedicates to* Memmius *his Books of the* Nature of Things, *and endeavours to vindicate his Doctrines from the Charge of Impiety, and briefly lays down the Arguments of This and the following Books. He enters upon his Subject, and labours strenuously,* That nothing can proceed from nothing, and that nothing can be reduced into nothing. *He proceeds to prove that there are some little Bodies which, tho' imperceptible to the Eye, may be conceiv'd by the Mind, of which all Beings are made: To these Corpuscles he subjoins a void or empty Space. He asserts, that there is nothing in Nature besides* Body *and* Void; *and that all Things else, such as Weight, Heat, Poverty, War,* &c. *are no more than certain Conjuncts or Events, Properties or Accidents of Body and Space. That these first Principles are perfectly solid, and by consequence indivisible, they are* Leasts (*for Body cannot be infinitely divided*) *and*

and Eternal. He then refutes Heraclitus, *who made Fire the Principle of all Things, and others who laid down that all Things proceeded from Air, Earth, or Water. He shews against* Empedocles, *that Things are not composed of the four Elements. He contradicts* Anaxagoras; *and, in the last place, employs a long Disputation to prove the Universe, which consists of* Body *and* Void, *to be infinite. He is very copious in his Arguments against the* Stoicks, *who held a Centre in the infinite Universe, down to which all heavy Things are continually striving, while the light work upward of their own accord; and describes the Opinions of* Epicurus *with a great deal of Eloquence. He banishes the* Antipodes, *and sooths with his Arguments the Imagination of Man, which delights to be led away into an Infinite, and never yet fixed any Bounds to Space, nor will ever dare to do so.*

T. Lucretii Cari

DE

RERUM NATURA

LIBER PRIMUS.

ÆNEADUM genetrix, hominum divûmque voluptas,
Alma Venus, cœli ſubter labentia ſigna
Quæ mare navigerum, quæ terras frugiferenteis
Concelebras; per Te quoniam genus omne animantum
Concipitur, viſitque exortum lumina ſolis:
Te, Dea, te fugiunt venti, te nubila cæli,
Adventumque tuum; tibi ſuaveis dædala tellus
Summittit flores, tibi rident æquora ponti,
Placatumque nitet diffuſo lumine cœlum.

gives her all her Titles; yet, at the same time, throws out bitter Reflections upon the then fashionable Devotion. He styles her Mother of *Rome*, because the *Romans* deduced their Origin from *Æneas*, who was the Son of *Venus* by *Anchises*.

I. Geere. Invent.

G.v. Gouwen.

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE

FIRST BOOK

MOTHER of *Rome*, Delight of Men and Gods, Sweet *Venus*; who with vital Power doſt fill the Sea bearing the Ships, the fruitful Earth, all Things beneath the rolling Signs of Heaven; for 'tis by Thee Creatures of every kind conceive, riſe into Life, and view the Sun's bright Beams. Thee Goddeſs, Thee the Winds avoid; the Clouds fly Thee, and thy Approach; with various Art the Earth for Thee affords her ſweeteſt Flowers; for Thee the Sea's rough Waves put on their Smiles, and the ſmooth Sky ſhines with diffuſed Light. For *The Invocation.*

[a] *Lucretius* as a Poet conforms to the Rule of his Art, and begins with an Invocation to *Venus*, that is the common natural Appetite to Procreation; which nevertheleſs he treats as a Goddeſs, as if he really expected Aſſiſtance from her, and gives her all her Titles; yet, at the ſame time, throws out bitter Reflections upon the then faſhionable Devotion. He ſtyles her Mother of *Rome*, becauſe the *Romans* deduced their Origin from *Æneas*, who was the Son of *Venus* by *Anchiſes*.

Nam simul ac species patefacta 'st verna diei,
Et reserata viget genitalis aura Favoni;
Aëriæ primum volucres te, Diva, tuumque
Significant initum percussæ corda tua vi:
Inde feræ pecudes persultant pabula læta,
Et rapidos tranant amneis; ita capta lepore,
Illecebrisque tuis omnis natura animantum
Te sequitur cupide, quo quamque inducere pergis:
Denique per maria, ac monteis, fluviosque rapaceis,
Frundiferasque domos avium, camposque virenteis,
Omnibus incutiens blandum per pectore amorem,
Efficis, ut cupide generatim sæcla propagent.
Quæ quoniam rerum Naturam sola gubernas,
Nec sine Te quicquam dias in luminis oras
Exoritur, neque fit lætum, nec amabile quicquam;
Te sociam studeo scribundis versibus esse,
Quos ego de RERUM NATURA *pangere conor*
Memmiadæ nostro: quem tu, Dea, tempore in omni
Omnibus ornatum voluisti excellere rebus.
Quo magis æternum da dictis, Diva, leporem:
Effice ut interea fera mœnera militiaï

Per

when the buxom Spring leads on the Year, and genial Gales of Weſtern Winds blow freſh, unlock'd from Winter's Cold, the airy Birds firſt feel Thee Goddeſs, and expreſs thy Power; thy active Flame ſtrikes through their very Souls. And then the ſavage Beaſts, with wanton Play, friſk o'er the chearful Fields, and ſwim the rapid Streams. So pleaſed with thy Sweetneſs, ſo tranſported by thy ſoft Charms, all living Nature ſtrives, with ſharp Deſire, to follow Thee her Guide, where Thou art pleas'd to lead. In ſhort, thy Power inſpiring every Breaſt with tender Love, drives every Creature on with eager Heat, in Seas, in Mountains, and in ſwifteſt Floods, in leafy Foreſts, and in verdant Plains, to propagate their Kind from Age to Age.

Since Thou alone doſt govern Nature's Laws, and nothing without Thee can riſe to Light, without Thee nothing can look gay or lovely; I beg Thee a Companion to my Lays, which, now I ſing of Nature, I devote to my dear [b] *Memmius*, whom Thou art ever pleaſed, ſweet Goddeſs, to adorn with every Grace; for him, kind Deity, inſpire my Song, and give immortal Beauty to my Verſe. Mean time, the bloody Tumults of the [c] War by

[b] This *Memmius*, to whom *Lucretius* inſcribes his Poem, travelled with him to *Athens*, where they ſtudied Philoſophy together; he was derived from the noble Family of the *Memmii*, who claimed their Extraction from the *Trojans*. He arrived at the Dignity of Prætor, and obtained *Bithynia* for his Province, but was ſoon recalled, being accuſed by *Cæſar* of Male-adminiſtration. Yet not many Years after his Return to *Rome*, he came to be Tribune of the People, and in a little time ſtood Candidate for the Conſulſhip; of which he not only failed, but being accuſed of Bribery, was, tho' *Cicero* pleaded in his Defence, convicted of it, and baniſhed into *Greece*, where he died in Exile.

[c] The Poet alludes to the diſtracted State of Affairs under the Adminiſtration of *Clodius* and *Catiline*, which gave ſuch a Blow to the Republick of *Rome*, as occaſioned its total Subverſion, which happened not long after.

Per maria ac terras omneis ſopita quieſcant.
Nam Tu ſola potes tranquilla pace juvare
Mortaleis, quoniam bella fera mœnera Mavors
Armipotens regit, in gremium qui ſæpe tuum ſe
Rejicit, æterno devinctus volnere amoris;
Atque ita ſuſpiciens tereti cervice repoſta
Paſcit amore avidos inhians in te, Dea, viſus:
Eque tuo pendet reſupini ſpiritus ore.
Hunc tu, Diva, tuo recubantem corpore ſancto
Circumfuſa ſuper, ſuaveis ex ore loquelas
Funde, petens placidam Romanis Incluta, pacem.
Nam neque Nos agere hoc patriaï tempore iniquo
Poſſumus æquo animo: neque Memmi clara propago
Talibus in rebus communi deeſſe ſaluti.
Quod ſupereſt, vacuas aureis mihi Memmiada, & te
Semotum à curis adhibe veram ad rationem,
Nec mea dona tibi ſtudio diſpoſta fideli,
Intellecta prius quam ſint, contempta relinquas.
Nam tibi de ſumma Cœli ratione, Deûmque,
Diſſerere incipiam, & rerum primordia pandam;
Unde omneis Natura creet res, auctet, alatque:
Quove eadem rurſum Natura perempta reſolvat:
Quæ nos Materiem, & Genitalia Corpora rebus
Reddunda in ratione vocare, & Semina rerum
Appellare ſuëmus, & hæc eadem uſurpare
Corpora Prima, quod ex illis ſunt omnia primis.
Omnis enim per ſe Divûm natura neceſſe eſt
Immortali ævo ſumma cum pace fruatur,

Semota

Sea and Land compoſe, and lay aſleep. For Thou alone Mankind with quiet Peace canſt bleſs; becauſe 'tis *Mars* Armipotent that rules the bloody Tumults of the War, and He by everlaſting Pains of Love bound faſt, taſtes in thy Lap moſt ſweet Repoſe, turns back his ſmooth long Neck, and views thy Charms, and greedily ſucks Love at both his Eyes. Supinely as he reſts his very Soul hangs on thy Lips; this God diſſolv'd in Eaſe, in the ſoft Moments when thy heavenly Limbs cling round him, with melting Eloquence careſs, great Goddeſs, and implore a Peace for *Rome*.

For neither can I write with chearful Strains, in Times ſo ſad, nor can the noble Houſe of *Memmius* deſert the common Good in ſuch Diſtreſs of Things. The Hours you ſpare apply with cloſe Attention to my Verſe, and free from Care receive true Reaſon's Rules; nor theſe my Gifts, prepared with faithful Pains, reject with Scorn before they are underſtood. For I begin to write of lofty Themes, of Gods, and of the Motions of the Sky, the Riſe of Things, how all Things Nature forms, and how they grow, and to Perfection riſe, and into what, by the ſame Nature's Laws, thoſe Things reſolve and die; which as I write I call by various Names; ſometimes 'tis Matter, or the firſt Principles or Seeds of Things, or firſt of Bodies, whence all elſe proceed. *The Subject of the Poem.*

[d]For the whole Nature of the Gods muſt ſpend an Immortality in ſofteſt Peace, removed from our Affairs,

[d] Here *Lucretius* begins his Impiety; had he contented himſelf only with deriding the ſuperſtitious Devotion of the Age he lived in, and not propoſed Principles of Irreligion, drawn from the Happineſs of the Deity, which he places in ſupine Idleneſs and Eaſe, he might have been read with much Satisfaction, as an excellent Satiriſt againſt the Heathen Worſhip; for he ſeverely ſwinges the mad Zeal of Men-ſacrificers, tho' perhaps he has not produced a true Inſtance in *Iphigenia*; yet Hiſtory

Semota ab noſtris rebus, ſejunctaque longe ;
Nam privata dolore omni, privata periclis,
Ipſa ſuis pollens opibus, nihil indiga noſtri,
Nec bene promeritis capitur, nec tangitur ira.
Humana ante oculos fœdè cum vita jaceret
In terris oppreſſa gravi ſub Religione,
Quæ caput à cœli regionibus oſtendebat,
Horribili ſuper aſpectu mortalibus inſtans ;
Primum GRAÏUS *homo mortaleis tollere contra*
Eſt oculos auſus, primuſque obſiſtere contra :
Quem nec fama Deûm, nec fulmina, nec minitanti
Murmure compreſſit Cælum, ſed eo magis acrem
Virtutem irritât animi, confringere ut arcta
Naturæ primus portarum clauſtra cupiret.
Ergo vivida vis animi pervicit, & extra
Proceſſit longe flammantia mœnia Mundi ;
Atque omne immenſum peragravit mente animoque :
Unde refert nobis victor quid poſſit oriri,
Quid nequeat ; finita poteſtas denique quoique
Quanam ſit ratione, atque alte terminus hærens.
Quare Relligio pedibus ſubjecta viciſſim
Obteritur, nos exæquat victoria Cælo.

Illud

Affairs, and ſeparated by Diſtance infinite; from Sorrow free, ſecure from Danger; in its own Happineſs ſufficient, and nought of ours can want, is neither pleaſed with Good, nor vexed with Ill.

Indeed Mankind, in wretched Bondage held, lay groveling on the ground, galled with the Yoke of what is called *Religion*; from the Sky this Tyrant ſhewed her Head, and with grim Looks hung over us poor Mortals here below; until a [e] Man of *Greece* with ſteady Eyes dared look her in the Face, and firſt oppoſed her Power. Him not the Fame of Gods nor Thunder's Roar kept back, nor threatening Tumults of the Sky; but ſtill the more they rouſed the active Virtue of his aſpiring Soul, as he preſſed forward firſt to break thro' Nature's ſcanty Bounds. His Mind's quick Force prevailed; and ſo he paſſed by far the flaming Limits of this World, and wander'd with his comprehenſive Soul o'er all the mighty Space; from thence returned triumphant; told us what Things may have a Being, and what cannot; and how a finite Power is fixed to each, a Bound it cannot break; and ſo Religion, which we feared before, by him ſubdued, we tread upon in turn; his Conqueſt makes us equal to the Gods.

ſtory, both ſacred and profane, gives us many ſad Relations of ſuch Cruelties: but ſince he declares that the Deſign of his writing is to free Men from the Fear of that Heavenly Tyrant *Providence*, &c. he muſt be read with ſome Caution, tho' his Arguments, in general, are weak, and, I think, can make but little Impreſſion.

[e] He attempts the Praiſe of *Epicurus* of *Athens*, the Son of *Neocles*, who, he ſays, firſt oppoſed himſelf to all theſe Terrors with undaunted Courage; and, by looking into the inmoſt Receſſes of Nature, diſcovered, as he thought, that all Things were made without the Care and Workmanſhip of the Gods, and therefore overthrew the Foundation of all Religion.

But

Illud in his rebus vereor, ne forte rearis
Impia te rationis inire elementa, viamque
Endogredi ſceleris: Quod contra, ſæpius olim
Relligio peperit ſceleroſa atque impia facta,
Aulide quo pacto Triviaï virginis aram
Iphianaſſaï turpârunt ſanguine fœde
Ductores Danaûm, delecti, prima virorum.
Cui ſimul infula virgineos circumdata comptus
Ex utraque pari malarum parte profuſa 'ſt,
Et mœſtum ſimul ante aras adſtare parentem
Senſit, & hunc propter ferrum celare miniſtros;
Aſpectuque ſuo lacrymas effundere civeis:
Muta metu terram genibus ſummiſſa petebat:
Nec miſeræ prodeſſe in tali tempore quibat,
Quod Patrio princeps donârat nomine Regem.
Nam ſublata virûm manibus tremabundaque ad aras
Deducta 'ſt, non ut, ſolenni more ſacrorum
Perfecto, poſſet claro comitari Hymenæo:
Sed caſta inceſte nubendi tempore in ipſo
Hoſtia concideret mactatu mœſta parentis,
Exitus ut claſſi felix, fauſtuſque daretur
Tantum Relligio potuit ſuadere malorum.
Tutemet à nobis jam quovis tempore Vatum
Terriloquis victus dictis deſciſcere quæres?
Quippe etenim quam multa tibi jam fingere poſſum
Somnia, quæ vitæ rationes vetere poſſint,
Fortunaſque tuas omneis turbare timore.
Et merito: nam ſi certam finem eſſe viderent

But in these Things I fear you will suspect you are learning impious Rudiments of Reason, and entring in a Road of Wickedness. So far from this, reflect what sad flagitious Deeds Religion has produced; by her inspired the *Grecian* Chiefs, the First of Men, at [f] *Aulis*, *Diana*'s Altar shamefully defiled with *Iphigenia*'s Blood; her Virgin Hair a Fillet bound, which hung in equal Length on either side her Face; she saw her Father, cover'd with Sorrow, stand before the Altar; for pity to his Grief the butchering Priests concealed the Knife; the City at the sight o'erflowed with Tears; the Virgin, dumb with Fear, fell low upon her Knees on the hard Earth; in vain the wretched Princess in Distress pleaded that she first gave the honoured Name of Father to the King; but hurried off, and dragged by wicked Hands, she trembling stood before the Altar: Alas! not as a Virgin, the solemn Forms being duly done, is drawn with pleasing Force to *Hymen*'s noble Rites, but a chaste Maid, just ripe for nuptial Joy, falls a sad Victim by a Father's Hand, only to beg a kind propitious Gale for *Grecian* Ships; such Scenes of Villany Religion could inspire!

Iphigenia

But still I fear your Caution will dispute the Maxims I lay down, who all your Life have trembled at the Poets frightful Tales. Alas! I could even-now invent such Dreams as would pervert the steadiest Rules of Reason, and make your Fortunes tremble to the Bottom. No wonder! but if Men were once convinced that Death

[f] The Sacrifice of *Iphigenia* is well known; for in these Notes I shall give no Account of the common Stories and Mythology of the Heathens, to be met with in every Dictionary: She was offer'd to *Diana* upon her Altar at *Aulis*, a Port of *Bœotia* on the River *Euripus*, her own Father assisting at the Sacrifice.

Ærumnarum homines, aliqua ratione valerent
Relligionibus, atque minis obſiſtere Vatum:
Nunc ratio nulla 'ſt reſtandi, nulla facultas,
Æternas quoniam pœnas in morte timendum.
Ignoratur enim quæ ſit natura animaï,
Nata ſit, an, contra, naſcentibus inſinuetur,
Et ſimul intereat nobiſcum morte dirempta,
An tenebras Orci viſat, vaſtaſque lacunas,
An pecudes alias divinitus inſinuet ſe,
ENNIUS *ut noſter cecinit, qui primus amœno*
Detulit ex Helicone perenni fronde coronam,
Per genteis Italas hominum quæ clara clueret,
Etſi præterea tamen eſſe Acheruſia templa
Ennius æternis exponit verſibus, edens:
Quo neque permanent animæ, neque corpora noſtra;
Sed quædam ſimulacra modis pallentia miris:
Unde ſibi exortam ſemper-florentis Homeri
Commemorat ſpeciem, lacrumas & fundere ſalſas
Cœpiſſe, & rerum naturam expandere dictis.
Quapropter bene, cum, Superis de rebus habenda
Nobis eſt ratio, Solis Lunæque meatus
Qua fiant ratione; & qua vi quæque genantur

Et

was the ſure End of all their Pains, they might with Reaſon then reſiſt the Force of all Religion, and contemn the Threats of Poets. Now we have no Senſe, no Power, to ſtrive againſt this Prejudice, becauſe we fear a Scene of endleſs Torments after Death.

And yet the Nature of the Soul we know not, whether formed with the Body, or at the Birth infuſed; and then, by Death cut off, ſhe periſhes as Bodies do; or whether ſhe deſcends to the dark Caves and dreadful Lakes of Hell; or, after Death, inſpired with heavenly Inſtinct, ſhe retires into the Brutes, as our Great [g] *Ennius* ſung, who firſt a Crown of Laurel ever green, brought down from *Helicon*; which gained him Fame through all the *Italian* Coaſts. And yet this Man, in never-dying Numbers, deſcribes the ſtately Palaces of *Acheron*, where nor our Souls or Bodies ever come, but certain Spectres ſtrange and wond'rous pale; from whence he tells how [h] *Homer*'s ever celebrated Shade appeared, and how his Eyes began to flow with briny Tears, as in immortal Verſe he ſung of Nature and her ſecret Laws.

Wherefore, I ſhall not only accurately write of Things above, as how the Sun and Moon their

[g] A *Latin* Poet, who lived about a hundred Years before *Lucretius*; he was a *Pythagorean*, and held the Doctrine of the Tranſmigration of Souls; he affirmed that the Soul of *Homer* was in his Body; but that he might not injure *Pluto*, he bequeathed to the infernal Manſions, not the Souls, nor the Bodies, but the Ghoſts, which the Ancients held to be a third Nature, of which, together with Body and Soul, the whole Man conſiſts. Theſe Spectres and Shadows of the Dead, appear, or ſeem to appear, when we are aſleep, or awake, or ſick, and terrify our Minds.

[h] *Ennius* uſed to ſay, that *Homer*'s Ghoſt appear'd to him from Hell, and bitterly weeping, diſcover'd to him the Nature of Things; for which *Cicero* ſufficiently laughs at him, in his ſecond Book of *Academick Queſtions*.

In terris : tum, cum primis, ratione ſagaci
Unde Anima atque Animi conſtet natura, videndum;
Et quæ res nobis vigilantibus obvia menteis
Terrificet, morbo affectis, ſomnoque ſepultis,
Cernere uti videamur eos, audireque coram, 135
Morte obita quorum tellus amplectitur oſſa.
Nec me animi fallit, GRAÏORUM *obſcura reperta*
Difficile inluſtrare LATINIS *verſibus eſſe,*
(Multa novis verbis præſertim cum ſit agendum,)
Propter egeſtatem linguæ, & rerum novitatem; 140
Sed tua me Virtus tamen, & ſperata voluptas
Suavis Amicitiæ, quemvis perferre laborem
Suadet, & inducit noctеis vigilare ſerenas,
Quærentem dictis quibus, & quo carmine demum
Clara tuæ poſſim præpandere lumina menti, 145
Res quibus occultas penitus conviſere poſſis.
Hunc igitur terrorem animi, tenebraſque neceſſe 'ſt
Non radii Solis, neque lucida tela Diei
Diſcutiant, ſed Naturæ ſpecies, Ratioque :
Principium hinc cujus nobis exordia ſumet, 150
NULLAM REM E NIHILO GIGNI DIVINITUS UNQUAM.

Quippe

Courſes run, and by what Power Beings in Earth and Heaven are formed, but chiefly ſearch with niceſt Care into the Soul and what her Nature is. What 'tis that meets our wakeful Eyes, and frights the Mind; and how, by Sickneſs or by Sleep oppreſſed, we think we ſee, or hear the Voice of thoſe who died long ſince, whoſe mould'ring Bones rot in the cold Embraces of the Grave.

I know 'tis hard to explain in *Latin* Verſe, the dark and myſtic Notions of the *Greeks*, (for I have Things to ſay require new Words) becauſe the Tongue is poor, the Subject new. But your Virtue, and the Pleaſures I expect from tender Friendſhip, makes me bear the Toil, and ſpend the ſilent Night with wakeful Eyes, ſtudious of Words and Numbers I ſhall uſe, to open to your Minds ſuch Scenes of Light, which ſhew the hidden Qualities of Things unknown. *The Difficulty of the Work.*

These Terrors of the Mind, this Darkneſs then, not the Sun's Beams, nor the bright Rays of Day can e'er diſpel, but Nature's Light and Reaſon; Whoſe firſt of Principles ſhall be my Guide: [i] *Nothing was by the Gods of Nothing made.* For hence it is that Fear *Nothing made out of Nothing.*

[i] He now enters upon his Subject, and lays down this Principle, *That Nothing is made of Nothing*, which he attempts to prove at large; he takes notice, that Men had obſerv'd many Effects upon Earth and in the Heavens, and not being able to diſcover the Cauſes of them, concluded that the Gods had produced them out of Nothing; the Falſity of which he undertakes to demonſtrate, tho' without Succeſs.

Quippe ita formido Mortaleis continet omneis,
Quod multa in Terris fieri, Cæloque tuentur,
Quorum operum cauſas nulla ratione videre
Poſſunt, ac fieri divino Numine rentur.
Quas ob res, ubi viderimus, nil poſſe creari
De nihilo, tum, quod ſequimur, jam rectius inde
Perſpiciemus, & unde queat res quæque creari,
Et quo quæque modo fiant opera ſine Divum.
Nam ſi de Nihilo fierent, ex omnibu' rebus
Omne genus naſci poſſet ; nil Semine egeret :
E mare primum homines, è terra poſſet oriri
Squammigerum genus, & volucres ; erumpere cælo
Armenta, atque aliæ pecudes : genus omne ferarum
Incerto partu culta, ac deſerta teneret :
Nec fructus iidem arboribus conſtare ſolerent,
Sed mutarentur : ferre omnes omnia poſſent.
Quippe, ubi non eſſent genitalia Corpora quoique,
Quî poſſet mater rebus conſiſtere certa ?
At nunc Seminibus quia certis quidque creatur,
Inde enaſcitur, atque oras in luminis exit,
Materies ubi ineſt cujuſque & Corpora prima :
Atque hac re nequeunt ex omnibus omnia gigni,
Quod certis in rebus ineſt ſecreta facultas.
Præterea, cur Vere roſam, frumenta Calore,
Viteis Autumno fundi ſudante videmus :
Si non, certa ſuo quia tempore Semina rerum
Cum confluxerunt, patefit, quodcunque creatur,
Dum tempeſtates adſunt, & vivida tellus
Tuto res teneras effert in luminis oras ?
Quod ſi de Nihilo fierent, ſubito exorerentur
Incerto ſpatio, atque alienis partibus anni :

Quippe

diſturbs the Mind, that ſtrange Events in Earth and Heaven are ſeen, whoſe Cauſes cannot appear by Reaſon's Eye, and then we ſay they were from Powers Divine. But when we reſt convinced that Nothing can ariſe from Nothing, then the Way is clear to our Purſuit; we diſtinctly ſee whence every Thing comes into Being, and how Things are formed without the Help and Trouble of the Gods.

If Things proceed from Nothing, every Thing might ſpring from any Thing, and want no Seed; Men from the Sea might firſt ariſe, and Fiſh and Birds break from the Earth, and Herds and tender Flocks drop from the Sky, and every kind of Beaſt fix'd to no certain Place, might find a Being in Deſerts or in cultivated Fields: Nor the ſame Fruit on the ſame Trees would grow, but would be chang'd, and all Things all Things bear. For had not every Thing its genial Seed, how is it that every Thing derives its Birth from Cauſes ſtill the ſame? But now, ſince Things are form'd from certain Seeds, and firſt riſe into Light, where every Being has its Principles and Matter fitly framed, from hence we ſee that all Things cannot ſpring from every Thing, ſince each has certain ſecret Properties peculiar to itſelf. Beſides,

Why do we ſee the Roſe adorn the Spring, the Fruits in Summer, and the ſweaty Autumn, preſſing the Vine, unleſs the fixed Seeds of Things, uniting in their proper Times, give Life to Beings, each in its ſtated Seaſon, while Mother Earth can truſt her tender Offspring with Safety to the Air. But if Things proceed from Nothing, in a moment they might ſpring at Times uncertain, at Quarters of the Year unfit, and there

Quippe ubi nulla forent primordia, quæ genitali
Concilio possent arceri tempore iniquo.
Nec porro Augendis rebus Spatio foret usus
Seminis ad coïtum, è Nihilo si crescere possent.
Nam fierent juvenes subito ex infantibu' parvis:
E terraque exorta repente arbusta salirent.
Quorum nil fieri manifestum 'st, omnia quando
Paullatim crescunt (ut par est) Semine certo:
Crescendoque genus servant; ut noscere possis
Quæque sua de Materia grandescere, alique.
Huc accedit uti sine certis imbribus anni
Lætificos nequeat fœtus summittere tellus:
Nec porro secreta cibo natura animantum
Propagare genus possit, vitamque tueri:
Ut potius multis communia corpora rebus
Multa putes esse, ut verbis Elementa videmus,
Quam sine Principiis ullam rem existere posse.
Denique cur Homines tantos natura parare
Non potuit, pedibus qui pontum per vada possent
Transire, & magnos manibus divellere monteis,
Multaque vivendo vitalia vincere sæcla:
Si non Materies quia rebus reddita certa 'st
Gignundis è qua constat quid possit oriri?
NIL *igitur fieri de* NILO *posse fatendum 'st:*
Semine quando opus est rebus, quo quæque creatæ
Aëris in teneras possint proferrier auras.
Postremo quoniam Incultis præstare videmus
Culta loca, & manibus meliores reddere fœtus:
Esse videlicet in terris Primordia rerum,
Quæ nos, fœcundas vertentes vomere glebas,
Terraïque solum subigentes, cimus ad ortus.

Quod

would be no proper Seeds, whose kindly Influence might check their Growth at Seasons that would kill them in the Bud.

Again, if Things could spring from Nought, what need of Time for Bodies to fulfil their Growth by Accession of new Matter? An Infant then might instantly become a Youth, and Trees start up in full Perfection from the Earth. But 'tis not so, 'tis plain; for Things, we know, grow by degrees from certain Seeds, and still as they grow keep their Kind; and thus you find each Being rises into Bulk, and thrives from Seed and Matter proper to itself.

Nor likewise can the Earth produce her Fruits to chear the Heart, unless with timely Showers impregnated; nor can Creatures, blessed with Life, deprived of Food, e'er propagate their Kind, or save their own Lives; and so you safer say that certain fixed Principles belong to certain Things, as Letters form our Words, than that from Nothing any Thing can rise.

Further; whence is it that Nature cannot shew Men so gigantick as on foot to wade through Seas, or with their Hands to tear up migthy Hills, or to surpass the common Bounds of Life, by many Ages, but that certain Seeds are fixed to all Things, whence they must arise? And so we must confess that Nothing springs from Nothing, since each Kind must first proceed from Seed, the Principle whence every Creature derives its Life, and feels the gentle Air.

Besides, because we find the Earth, improved by Care, exceeds the uncultivated Soil, and by our Labour offers richer Fruits, we say that in the Earth the Seeds of Things lie still, which, by turning up the fruitful Clods, by Ploughing, and, by breaking of the Ground, we force to spring;

Quod si nulla forent, nostro sine quæque labore
Sponte sua multo fieri meliora videres.
Huc accedit, uti quicque in sua Corpora rursum
Dissolvat Natura, neque ad Nihilum interimat res.
Nam, si quid mortale è cunctis partibus esset,
Ex oculis res quæque repente erepta periret;
Nulla vi foret usus enim, quæ partibus ejus
Discidium parere, & nexus exsolvere posset.
At nunc, æterno quia constant Semine quæque,
Donec vis obiit, quæ res diverberet ictu,
Aut intus penetret per inania, dissolvatque,
Nullius exitium patitur Natura videri.
Præterea, quæcunque vetustate amovet ætas,
Si penitus perimit consumens Materiem omnem,
Unde animale genus generatim in lumina vitæ
Redducit Venus? aut reductum dædala tellus
Unde alit, atque auget, generatim pabula præbens?
Unde mare ingenui fontes, externaque longè
Flumina suppeditant? unde æther sidera pascit?

Omnia

but then, if no ſuch Seeds lay there, [k] the Fruits, without our Labour, would of their own accord improve, and of themſelves prevent our Care.

Add here, that Nature does diſſolve all Bodies into their Principles again; nor can reduce Things into Nothing. *No Annihilation.*

[l] For if every Being was liable to Death through all its Subſtance, ſnatch'd from our Eyes, it would directly periſh; no need of Violence to make a Breach in all its Parts, and looſe the vital Bands. But now ſince Things are formed from eternal Seeds, Nature wills that nothing be deſtroyed, unleſs ſome Force prevails, which beats with Blows its outward Form; or pierces through the Pores with ſubtile Art, and ſo diſſolves the Frame.

Besides, ſuch Things as are removed by Age, if Time deſtroys them quite in all their Parts, whence does the Power of Love reſtore to Light the ſeveral Race of Beings? Whence the Earth, with niceſt Art, does nouriſh them when born, and makes them grow, and feeds with proper Food each in its Kind? Whence do the bounteous Springs, and Rivers, with their wandring Streams from far, ſupply the Sea? [m] The Air

[k] That is, what can hinder Plants that are produced from Nothing, from improving and growing every Year more fair and fruitful of their own accord?

[l] If Things were mortal in all their Parts, there would be no need of Violence to diſſolve them; but as every Thing would be produced and appear on a ſudden without the Endeavour or Force of any other Thing, ſo without the Force or Violence of any other Thing likewiſe every Thing would periſh, not by a Diſſolution of its Parts, but withdrawing from our Eyes, would vaniſh away in a moment, and thus reſo[illegible] into Nothing; for the Reaſon why Force is requiſite to diſſolve every Thing, is becauſe it conſiſts of Seeds that remain after its Diſſolution.

[m] It was the Doctrine of the *Epicureans*, that the Sun and Stars were Fires, that were nouriſhed and kept alive by Vapours and Exhalations that riſe from the Earth and Sea.

Omnia enim debet, mortali Corpore quæ ſunt,
Infinita ætas conſumſe, anteacta dieſque.
Quod ſi in eo ſpatio, atque anteacta ætate fuere,
E quibus hæc Rerum conſiſtit Summa refecta:
Immortali ſunt naturâ prædita certé.
Haud igitur poſſunt ad Nilum quæque reverti.
Denique res omneis eadem vis cauſaque volgò
Conficeret, niſi Materies æternа teneret
Inter ſe nexas minus aut magis endopedite.
Tactus enim lethi ſatis eſſet cauſa profecto:
Quippe, ubi nulla forent æterno Corpore, eorum
Contextum vis deberet diſſolvere quæque.
At nunc, inter ſe quia nexus principiorum
Diſſimiles conſtant, æternaque materies eſt,
Incolumi remanent res corpore, dum ſatis acris
Vis obeat pro textura cujuſque reperta.
Haud igitur redit ad Nihilum res ulla, ſed omnes
Diſcidio redeunt in corpora materiaï.
Poſtremo pereunt imbres, ubi eos pater Æther
In gremium matris Terraï præcipitavit.
At nitidæ ſurgunt fruges, ramique vireſcunt
Arboribus; creſcunt ipſæ, fætuque gravantur:
Hinc alitur porro noſtrum genus, atque ferarum:
Hinc lætas urbeis pueris florere videmus,
Frundiferaſque novis avibus canere undique ſylvas,
Hinc feſſæ pecudes pingues per pabula læta
Corpora deponunt, & candens lacteus humor
Uberibus manat diſtentis; hinc nova proles
Artubus infirmis teneras laſcivaper herbas
Ludit, lacte mero menteis percuſſa novellas.

Haud

whence feed the Stars? For that vaſt Tract of Time already paſt had long ago conſumed Things that were form'd from mortal Seed; but if thoſe Bodies which compoſe this Univerſe of Things were ſtill ſupplied through all that Space and Periods of Time that paſs'd long ſince, they ſurely muſt conſiſt of an immortal Nature, and from Death ſecure, can never into Nothing fall.

Again, the ſame Violence would every where deſtroy all Beings, if the eternal Power of Matter did not hold faſt their cloſe compacted Frame in Bonds more ſtrong or weak; a ſingle Touch would ſurely be the Cauſe of Death; for Things form'd out of mortal Seed by any Force muſt periſh, and their Frame be quite diſſolv'd; but now, becauſe the Union of the Seeds of Bodies differs, which conſiſt of Matter eternal in its Nature, every Being is ſafe from Danger till ſome proper Force, proportioned to its Texture, makes the Aſſault. So Nothing can return to Nothing; every Thing reſolves by Separation of its Parts into its Principles from whence it ſprung.

Lastly, the Rains that Father *Æther* pours into the Womb of Mother Earth do ſeem to periſh there, but ſtrait fair Fruits ſpring up; the Boughs grow green upon the Trees, their Limbs increaſe, and bend beneath a Load of Fruit; hence all the living Race of Men and Beaſts are fed, our gallant Cities filled with Youth, our leafy Woods reſound with Songs of Birds new fledg'd; the weary Flocks grown fat repoſe their Bodies on the fertile Plains, while the white milky Humour from their Dugs diſtended flows; and hence their ſprightly Young, in wanton Play, friſk with their tender Limbs o'er the ſoft Graſs, chearing their little Hearts with the pure Milk;

and

Haud igitur penitus pereunt quæcunque videntur :
Quando aliud ex alio reficit Natura, nec ullam
Rem gigni patitur, nisi morte adjutam aliena.
Nunc age, res quoniam docui non posse creari
De Nihilo, neque item genitas ad Nil revocari ;
Ne qua forte tamen cœptes diffidere dictis,
Quod nequeunt oculis rerum Primordia cerni ;
Accipe præterea, quæ Corpora Tute necesse 'st
Confiteare esse in rebus, nec posse videri.
Principio, VENTI *vis verberat incita pontum,*
Ingenteisque ruit naveis, & nubila differt ;
Interdum rapido percurrens turbine campos
Arboribus magnis sternit, monteisque supremos
Silvifragis vexat flabris : ita perfurit acri
Cum fremitu, sævitque minaci murmure pontus.
Sunt igitur VENTI *nimirum corpora cæca,*
Quæ mare, quæ terras, quæ denique nubila cæli
Verrunt, ac subito vexantia turbine raptant.
Nec ratione fluunt alia, stragemque propagant,
Ac cum mollis aquæ fertur natura repente
Flumine abundanti, quod largis imbribus auget
Montibus ex altis magnus decursus aquaï :
Fragmina conjiciens sylvarum, arbustaque tota ;

and therefore Things we ſee do not entirely die; [n] Nature ſtill renews one Being by another, nor does ſhe ſuffer one Thing to be, unleſs ſupplied with Matter from ſomething elſe that was diſſolved before.

And now, ſince I have taught that Nothing can proceed from Nothing, nor can Things once form'd to Nothing be reduced, [o] leſt you by chance ſhould doubt my Reaſons, ſince the Seeds of Things cannot be ſeen with naked Eyes; hear further, that there are Seeds of Bodies (and you muſt confeſs there are) impervious to the Sight.

And firſt, the raging Force of Winds does laſh the Sea, o'erthrow vaſt Ships, and chaſe the Clouds; ſometimes they ſcour the Plains with furious Storms, and ſpread them o'er with talleſt Trees, and vex the lofty Hills with Blaſts that rend the Woods. And ſo they bluſter with a dreadful Sound, and roar with threatening Noiſes through the Air. Theſe Winds are therefore Bodies to the Eye unſeen, which ſcour the Sea, the Lands, the Clouds, and toſs them, thus tormented, with their Blaſts. They act the ſame, and ſpread Deſtruction round as a ſtill Stream, increaſed by ſudden Rain, and ſwell'd by Torrents pouring from the Hills, the Effect of driving Showers, is born along, rending the Limbs of Trees, and then whole Woods: Nor can the

[n] He concludes that Nothing returns to Nothing, ſince Nature produces one Thing out of another, and never any Thing new, but makes uſe of the Matter of another Thing that had been diſſolved before.

[o] Leſt *Memmius* ſhould diſtruſt the Validity of the Arguments he has produced to eſtabliſh his Atoms, becauſe the firſt Principles of Things are, by reaſon of their Exility, imperceptible to the Senſe, he brings ſeveral Inſtances of corporeal Subſtances, to which no Man denies an Exiſtence, tho' they are inviſible to the Eye.

ſtrongeſt

Nec validi poſſunt pontes venientes aquaï
Vim ſubitam tolerare: ita magno turbidus imbri
Molibus incurrens validis cum viribus amnis,
Dat ſonitu magno ſtragem; volvitque ſub undis
Grandia ſaxa, ruit quà quidquid fluctibus obſtat.
Sic igitur debent VENTI *quoque flamina ferri:*
Quæ, veluti validum flumen, cum procubuere
Quamlibet in partem, trudunt res ante, ruuntque
Impetibus crebris; interdum vertice torto
Corripiunt, rapidoque rotantia turbine portant.
Quare etiam atque etiam ſunt VENTI *Corpora cæca:*
Quandoquidem factis ac moribus, æmula magnis
Amnibus inveniuntur, aperto Corpore qui ſunt.
Tum porro varios rerum ſentimus ODORES,
Nec tamen ad nareis venienteis cernimus unquam:
Nec calidos ÆSTUS *tuimur, nec* FRIGORA *quimus*
Uſurpare oculis, nec VOCES *cernere ſuemus;*
Quæ tamen omnia Corporea conſtare neceſſe 'ſt
Natura: quoniam ſenſus impellere poſſunt.
TANGERE ENIM ET TANGI, NISI CORPUS, NULLA POTEST RES.
Denique fluctifrago ſuſpenſæ in littore Veſtes
Uveſcunt, eædem diſpanſæ in Sole fereſcunt;
At neque quo pacto perſederit humor aquaï
Viſu 'ſt nec rurſum quo pacto fugerit æſtu;
In parvas igitur parteis diſpergitur Humor,
Quas oculi nulla poſſunt ratione videre.
Quin etiam multis Solis redeuntibus annis
Annulus in digito ſubtertenuatur habendo:
Stillicidi caſus lapidem cavat: uncus aratri
Ferreus occultè decreſcit Vomer in arvis:
Strataque jam volgi pedibus detrita viarum
Saxea conſpicimus; tum portas propter ahena

Signa

ſtrongeſt Bridges bear the Force, ſo ſudden, of the ruſhing Flood; the Stream, made mad by haſty Rains, beats on the Damms with Force impetuous, ſwells through the Breach with horrid Noiſe, and rolls the maſſy Stones under its Waves, and breaks what ſtops its Tide. Juſt ſo the Hurricanes of Wind drive on which way they point their Blaſts, like mighty Floods, force all before them, beat with frequent Strokes; ſometimes they ſnatch with rapid Turns, and whirl Things as they roll in Eddies through the Air. Theſe Winds, 'tis plain, are Bodies ſtill unſeen, ſince by their furious Blaſts they rival in their Force the largeſt Streams, which Bodies are we own.

Besides, we feel the various Smells of Things, but can't diſcern how they affect the Noſe; nor can we ſee the raging Heat, nor with our Eyes perceive the Cold, nor can we ſee a Voice; all which by Nature are of Bodies form'd, becauſe they make Impreſſion on the Senſe, for nothing but Body can be touch'd, or touch.

Again, a Garment hung up nigh the Shore, That breaks the Waves, grows wet, and, to the Sun expanded, dries; yet no one ever ſaw how the moiſt Vapour fix'd, or how again it fled before the Heat; the watery Drops muſt be diſſolv'd into ſmall Parts too ſubtle to be at all diſcover'd by the Eye.

But further, after many circling Years, a Ring upon the Finger wears away, the Fall of dropping Water hollows Stones, the crooked Plough-ſhare, tho' of Iron, waſtes in the Fields inſenſibly by Uſe; we ſee the Streets, paved with hard Stones, worn out by frequent Tread of Paſſengers; [p] the

[p] He means the Images of the Tutelar or Guardian Gods, whoſe Right Hand, whoever came into the City or went out of it, was uſed to kiſs, *boni ominis causâ*, for good Luck's ſake.

brazen

Signa manus dextras ostendunt attenuari
Sæpe salutantum tactu, præterque meantum:
Hæc igitur minui, cum sint detrita videmus;
Sed quæ Corpora decedant in tempore quoque,
Invida præcluſit ſpeciem Natura videndi.
Poſtremo, quæcunque Dies, Naturaque rebus
Paullatim tribuit, moderatim creſcere cogens,
Nulla poteſt oculorum acies contenta tueri;
Nec porro quæcunque ævo, macieque ſeneſcunt:
Nec mare quæ impendent veſco ſale Saxa pereſa,
Quid quoque admittant in tempore, cernere poſſis.
Corporibus cæcis igitur Natura gerit res.
Nec tamen undique Corporea ſtipata tenentur
Omnia natura, namque eſt in rebus INANE.
Quod tibi cognôſſe in multis erit utile rebus:
Nec ſinet errantem dubitare, & quærere ſemper
De Summa rerum, & noſtris diffidere dictis;
Quapropter locus eſt intactus, INANE, *vacanſque.*
Quod ſi non eſſet, nulla ratione moveri
Res poſſent; namque officium, quod Corporis extat,
Officere, atque obſtare, id in omni tempore adeſſet
Omnibus: Haud igitur quidquam procedere poſſet,
Principium quoniam cedendi nulla daret res.
At nunc per maria, ac terras, ſublimaque cæli,
Multa modis multis varia ratione moveri
Cernimus ante oculos; quæ, ſi non eſſet INANE,
Non tam ſollicito motu privata carerent;
Quàm genita omnino nulla ratione fuiſſent:
Undique Materies quoniam ſtipata quieſſet.

brazen Statues nigh the Gates ſhew their Right Hands made leſs by many a Kiſs of thoſe who worſhip, or who paſs along. Theſe Things we ſee ſhew leſs and leſs, and wear; but what a Share of Matter every time is bruſhed off, Nature in Envy to us, has not indulg'd the Faculty to ſee.

LASTLY, what every Day and Nature do beſtow on Beings, to make them grow by juſt Degrees, not the moſt piercing Eye could ever find, nor yet the Particles that fly and waſte by Age or by Decay; nor can you ſee by what degrees the Rocks are eaten through by the corroding Salt of daſhing Waves: Thus Nature works by Bodies not diſcern'd.

AND yet all Beings are not form'd of cloſe and ſolid Parts; in Things there is a *Void*, which in your Searches into Nature will be of uſe to know. This will preſerve your wand'ring Mind from Doubt, prevent your conſtant Toil by judging right of Nature's Laws, and make my Words believ'd. *There muſt be a Void.*

WHEREFORE there is a Place we call a [q] *Void*, an empty Space intangible, or elſe no Bodies could be moved, or ſtir; the Quality all Bodies have to ſtop and to oppoſe does never fail, ſo that to move would be in vain to try, no Body firſt by yielding would give way. But now we ſee before our Eyes, that Things move various ways in Seas, in Earth, and in the Heaven above; but were no *Void*, they would not be depriv'd of that Activity of Motion only, but would not be at all; for Matter wedg'd and crouded cloſe on every ſide had ever been at reſt.

[q] If there were no Void interſperſed in Things, all Things would be crouded to ſuch a degree, that not only nothing in the whole Univerſe could be moved from its Place, but it would be even impoſſible to give a Reaſon, and explain how any thing can be generated, becauſe a local Motion is abſolutely neceſſary for the Generation of all Things, and without a Void there can be no Motion whatever.

BESIDES,

Præterea quamvis Solidæ res esse putentur,
Hinc tamen esse licet Raro cum corpore cernas:
In saxis, ac speluncis permanat Aquarum
Liquidus humor, & uberibus flent omnia guttis:
Dissupat in corpus sese Cibus omne animantum:
Crescunt Arbusta, & fœtus in tempore fundunt,
Quod Cibus in totas usque ab radicibus imis
Per truncos, ac per ramos diffunditur omneis:
Inter septa meant Voces, & clausa domorum
Transvolitant: rigidum permanat Frigus ad ossa.
Quod, nisi INANIA *sint, qua possent Corpora quæque*
Transire, haud ulla fieri ratione videres.
Denique cur alias aliis præstare videmus
Pondere res rebus, nihilo majore figura?
Nam, si tantundem 'st in Lanæ glomere, quantum
Corporis in Plumbo 'st, tantundem pendere par est;
Corporis officium est quoniam premere omnia deorsum:
Contra autem natura manet sine pondere INANIS.
Ergo quod Magnum 'st æque, Leviusque videtur,
Nimirum plus esse sibi declarat INANIS:
At contra Gravius plus in se CORPORIS *esse*
Dedicat, & multò VACUI *minus intus habere.*
Est igitur nimirum id, quod ratione sagaci
Quærimus, admistum rebus quod Inane vocamus.

Illud

Besides [r] though Things appear of ſolid Parts compoſed, yet you will find them, in ſome meaſure, form'd of Bodies that are rare; the liquid Moiſture of the Water ſweats through Rocks and Stones, and all Things weep with Drops abundant; the Food that every Creature eats, diſperſes through the Body; the Trees increaſe and grow, and in due Seaſon ſhew their Fruit; becauſe the Juice is from the lower Roots ſpread through the Trunk, and over all the Boughs. Sounds paſs through ſtrong Partitions, and fly quick through Walls of Houſes, and the piercing Cold ſtrikes through the very Bones; but were no *Void*, no empty Space, that Bodies e'er ſhould paſs, you'd find a Thing impoſſible to prove.

Again, [s] why do we ſee ſome Things exceed others in Weight, tho' of an equal Size? For if as much of Body went to form a Ball of Wooll, as made a Ball of Lead, their Weight would be the ſame; for the Quality of Body is to preſs downward: but a perfect *Void* by Nature has no Weight; ſo that a Body of equal Size, but lighter in its Weight, proves it has more of empty Space. So again, the heavier Body has more of ſolid Parts 'tis plain, and has within it leſs of *Void*. And this is doubtleſs what with Reaſon's ſearching Eye we look for, mixed with Things, we call it *Space*.

[r] Some Bodies, he obſerves, pierce and diſtil through Things that ſeem to be moſt ſolid, as Water through Stones, which could never be, were there not between the Particles of theſe Things ſome void Spaces, through which theſe Bodies might paſs.

[s] It is hard to conceive why two Bodies of the ſame Shape and Size ſhould weigh one more than the other, except the one had more of Body, to which Weight is natural, and the other more of *Void*, which has no Weight at all.

Illud in his rebus, ne te deducere vero
Possit, quod quidam fingunt, præcurrere cogor;
Cedere Squamigeris latices nitentibus aiunt,
Et liquidas aperire vias; quia post loca Pisces
Linquant, quo possint cedentes confluere undæ;
Sic alias quoque res inter se posse moveri,
Et mutare locum; quamvis sint omnia plena:
Scilicet id falsa totum ratione receptum 'st.
Nam quò Squamigeri poterunt procedere tandem,
Ni spatium dederint latices? concedere porro
Quò poterunt undæ, cum pisces ire nequibunt?
Aut igitur motu privandum 'st corpora quæque;
Aut esse admistum dicendum 'st rebus INANE;
Unde initium primum capiat res quæque movendi.
Postremo duo de concursu Corpora lata,
Si cita dissiliant, nempe aër omne necesse 'st,
Inter corpora quod fuvat, possidat INANE.
Is porro, quamvis circum celerantibus auris
Confluat, haud poterit tamen uno tempore totum
Complere spatium: Nam primum quemque necesse 'st
Occupet ille locum, deinde omnia possideantur.
Quòd si forte aliquis, cùm Corpora dissiluere,
Tum putat id fieri, quia se condenseat aër,
Errat; nam VACUUM *tum fit, quod non fuit ante;*
Et repletur item, VACUUM *quod constitit ante:*

But I am forc'd to ſtep before, and anſwer what ſome pretend, leſt you ſhould be ſeduced from Truth: [t] They ſay the Waters yield to Fiſh making their way, and ope their liquid Paths; for when the Fiſh have left a Space, that inſtant thither the yielding Waters circling flow. By the ſame Rule, all Beings may be moved among themſelves, and change their former Place, though all Things ſhould be full: but this, 'tis plain, is falſe throughout; for how could Fiſh advance at all, unleſs the Waters gave them way? And whither ſhould the Waves retire, if the Fiſh did not move, and leave a Space behind? So that all Bodies muſt be deprived of Motion, or you muſt ſay a Void is mixed with every Thing from whence each Being firſt derives a Power to move.

Lastly [u], if two broad Bodies meet, and inſtantly are ſeparated again, the Air muſt needs fill up the Void that is between; but this Air, though it ſhould hurry with its ſwifteſt Powers, it cannot all at once fill up the Space, theſe Bodies will diſcloſe at parting; firſt the neareſt Part will be filled up, and then the more remote, until the whole be full.

If one ſhould ſay, when theſe flat Bodies meet the Air is condens'd, but when they part the Air is rarified, 'tis a Miſtake; for then there muſt be *Void* where there was none before, and that *Void* that was before muſt now be full; in ſuch a

[t] The Water could not give way unleſs there was an empty Place for it to retire to; and therefore there muſt be a Void mix'd with Bodies, or there could be no Motion at all.

[u] If two ſmooth broad Bodies meet, and are parted of a ſudden, a Void will be cauſed by their Diſſolution; for all Matter muſt have been driven away by thoſe two Bodies, and therefore the Space that opens between them, as they part, will be void of all Body.

Nec tali ratione poteſt denſerier aër,
Nec, ſi jam poſſet, ſine INANI *poſſet, opinor,*
Se ipſe in ſe trahere, & parteis conducere in unum:
Qua propter, quamvis cauſando multa moreris,
Eſſe in rebus INANE *tamen fateare neceſſe 'ſt.*
Multaque præterea tibi poſſum commemorando
Argumenta, fidem dictis, conradere noſtris;
Verum animo ſatis hæc veſtigia parva ſagaci
Sunt, per quæ poſſis cognoſcere cætera Tute:
Namque Canes ut montivagæ perſæpe feraï
Naribus inveniunt intectas frunde quietes,
Cum ſemel inſtiterunt veſtigia certa viaï:
Sic alid ex alio per te Tute ipſe videre
Talibus in rebus poteris, cæcaſque latebras
Inſinuare omneis, & Verum protrahere inde:
Quod ſi pigrâris, paullumve abſceſſeris ab re,
Hoc tibi de plano poſſum promittere, MEMMI:
Uſque adeo largos hauſtus de fontibu' magnis
Lingua meo ſuavis diti de pectore fundet,
Ut verear, ne tarda prius per membra Senectus
Serpat, & in Nobis Vitaï clauſtra reſolvat,
Quàm tibi de quavis una re verſibus omnis
Argumentorum ſit copia miſſa per aureis.
Sed nunc jam repetam cæptum pertexere dictis:
Omnis, ut eſt, igitur, per ſe, Natura, duabus
Conſiſtit rebus; nam CORPORA *ſunt, &* INANE,
Hæc in quo ſita ſunt, & quà diverſa moventur:
Corpus enim per ſe communis deliquat eſſe
Senſus; quo niſi prima fides fundata valebit,
Haud erit occultis de rebus quo referentes
Confirmare animi quicquam ratione queamus.
Tum porro Locus, ac Spatium, quod INANE *vocamus,*
Si nullum foret, haud uſquam ſita Corpora poſſent
Eſſe, neque omnino quàquam diverſa meare;
Id quod jam ſupera tibi paullo oſtendimus ante:

Præterea

Caſe, the Air can't be condens'd; and if it could, it can't without a *Void* contract itſelf, and ſo reduce its Parts into a cloſer Space: Wherefore, perplex the Matter as you pleaſe, you muſt confeſs in Things there is a *Void*.

I could by many Arguments confirm this Syſtem of a *Void*, and fix your Faith to what I ſay; but theſe ſmall Tracks I have drawn, to ſuch a ſearching Mind, will be enough; the reſt you may find out without a Guide. For as ſtaunch Hounds, once put upon the Foot, will by the Noſe ſoon rouſe the Mountain Game from their thick Covers; ſo you, in Things like theſe, will one Thing by another trace, will hunt for Truth in every dark Receſs, and draw her thence.

But if you doubt, or in the leaſt object to what I ſay, I freely promiſe this, my *Memmius*, my tuneful Tongue ſhall, from the mighty Store that fills my Heart, pour out ſuch plenteous Draughts from the deep Springs, that tardy Age I fear will firſt creep through my Limbs, and quite break down the Gates of Life, before I can explain in Verſe the many Arguments that give a Light to one Particular. But now I ſhall go on to finiſh regularly what I begun.

All Nature therefore, in itſelf conſidered, is one of theſe, is *Body* or is *Space*; in which all Things are placed, and from whence the various Motions of all Beings ſpring. That there is Body common Senſe will ſhew, this as a fundamental Truth muſt be allowed, or there is nothing we can fix as certain in our Perſuit of hidden Things, by which to find the Truth, or prove it when 'tis found. Then if there were no Place or Space, we call it *Void*, Bodies could have no where to be, nor could they move at all, as we have fully proved to you before.

There is nothing beſides Body and Void.

Præterea nihil est, quod possis dicere ab omni
CORPORE *sejunctum, secretumque esse ab* INANI :
Quod quasi tertia sit rerum natura reperta.
Nam quodcunque erit, esse aliquid debebit id ipsum
Augmine vel grandi, vel parvo denique dum sit ;
Cui si Tactus erit quamvis levis, exiguusque,
Corporum augebit numerum, summamque sequetur ;
Sin Intactile erit, nulla de parte quod ullam
Rem prohibere queat per se transire meantem ;
Scilicet hoc id erit Vacuum, quod Inane vocamus.
Præterea per se quodcunque erit, aut faciet quid,
Aut aliis fungi debebit agentibus ipsum ;
Aut erit ut possint in eo res esse, gerique :
At facere & fungi sine CORPORE *nulla potest res :*
Nec præbere locum porro, nisi Inane, Vacansque
Ergo præter INANE, *&* CORPORA, *tertia per se*
Nulla potest rerum in numero natura relinqui ;
Nec, quæ sub sensus cadat ullo tempore nostros,
Nec, ratione animi quam quisquam possit apisci.
Nam quæcunque cluent, aut his CONJUNCTA *duabus*
Rebus ea invenies ; aut horum EVENTA *videbis.*
Conjunctum 'st id, quod nunquam sine perniciali
Discidio potis est sejungi, seque gregari :
Pondus uti saxis, Calor ignibu', Liquor aquaï,
Tactus Corporibus cunctis, Intactus Inani.
Servitium contra, Libertas, Divitiæque,
Paupertas, Bellum, Concordia, cætera, quorum
Adventu manet incolumis natura, abituque,
Hæc soliti sumus, ut par est, EVENTA *vocare.*

Tempus

Besides, there is Nothing you can ſtrictly ſay, It neither Body is nor Void, which you may call a third Degree of Things diſtinct from theſe. For every Being muſt in Quantity be more or leſs; and if it can be touch'd, tho' ne'er ſo ſmall or light, it muſt be *Body*, and ſo eſteemed; but if it can't be touch'd, and has not in itſelf a Power to ſtop the Courſe of other Bodies as they paſs, this is the *Void* we call an empty Space.

Again, [x] whatever Is muſt either act itſelf, or be by other Agents acted on; or muſt be ſomewhat in which other Bodies muſt have a Place and move; but Nothing without Body can act, or be acted on; and where can this be done, but in a Vacuum or empty Space? Therefore, beſide what Body is or Space, no third Degree in Nature can be found, Nothing that ever can affect our Senſe, or by the Power of Thought can be conceiv'd. All other Things you'll find eſſential *Conjuncts*, or elſe the Events or Accidents of theſe. I call eſſential Conjunct, what's ſo joined to a Thing that it cannot, without fatal Violence, be forced or parted from it; ſuch is Weight to Stones, to Fire Heat, Moiſture to the Sea, Touch to all Bodies, and not to be touch'd eſſential is to *Void*; but, on the contrary, Bondage, Liberty, Riches, Poverty, War, Concord, or the like, which not affect the Nature of the Thing, but when they come or when they go, the Thing remains entire; theſe, as 'tis fit we ſhould, we call *Events*.

[x] Nothing exiſts but Body and Void; for whatever is, either has a Power of acting on another, or may ſuffer from another: that is, it muſt be ſubject either to Action or Paſſion, and that muſt be a Body; or it muſt be that in which Things are contained, and in which they are made and moved, and that is the Void.

Tempus item per se non est, sed Rebus ab ipsis
Consequitur sensus, transactum quid sit in ævo,
Tum quæ Res instet; quid porro deinde sequatur:
Nec per se quemquam TEMPUS *sentire fatendu 'st*
Semotum ab rerum motu, placidaque quiete.
Denique Tyndaridem raptam, belloque subactas
Trojugenas genteis cum dicunt esse, videndu 'st,
Ne forte hæc per se, cogant nos, esse fateri:
Quando ea sæcla hominum, quorum hæc eventa fuere
Irrevocabilis abstulerit jam præterita ætas.
Namque aliud Rebus, aliud regionibus ipsis
Eventum dici poterit, quodcunque erit actum.
Denique Materies si rerum nulla fuisset,
Nec Locus, ac Spatium, res in quo quæque geruntur;
Nunquam Tyndaridis formæ conflatus amore
Ignis Alexandri Phrygio sub pectore glisceus
Clara accendisset sævi certamina belli:
Nec clam durateus Trojanis Pergama partu
Inflammasset equus nocturno Grajugenarum;
Perspicere ut possis Res Gestas funditus omneis,
Non ita, uti CORPUS, *per se constare nec esse:*
Nec ratione cluere eadem, qua constat INANE:

Sed

[y] Time likewiſe of itſelf is Nothing; our Senſe collects from Things themſelves what has been done long ſince, the Thing that preſent is, and what's to come. For no one, we muſt own, e'er thought of Time diſtinct from Things in Motion or at Reſt.

For when the Poets ſing of [z] *Helen*'s Rape, or of the *Trojan* State ſubdued by War, we muſt not ſay that theſe Things do exiſt now in themſelves, ſince Time, irrevocably paſt, has long-ſince ſwept away that Race of Men that were the Cauſe of thoſe *Events*; for every Act is either properly the Event of Things, or of the Places where thoſe Things are done.

Further, if Things were not of Matter form'd, were there no Place or Space where Things might act, the Fire that burn'd in *Paris*' Heart, blown up by Love of *Helen*'s Beauty, had never rais'd the famous Conteſts of a cruel War; nor had the Wooden Horſe ſet *Troy* on fire, diſcharging from his Belly in the Night the armed *Greeks:* from whence you plainly ſee that Actions do not of themſelves ſubſiſt, as Bodies do, nor are in Nature ſuch as is a *Void*, but rather are

[y] *Pythagoras*, *Heraclitus* and others believed, that Time was a Body; but *Lucretius* calls it an Event, attributed to Things by the Mind or Thought only, according as they are conceived to perſevere in the State in which they are, or to ceaſe from it, and to preſerve a longer or ſhorter Exiſtence, and to have it, or to have had it, or to be to have it. *Epicurus*, becauſe he ſaw that Time is nothing beſides Body and Void, aſſerted, that it does not exiſt of itſelf, nor as a Conjunct or Event, but as the chief Event of Events; he taught, that it exiſts not in Reality, but only in the Mind, and therefore may properly be called a Being of the Underſtanding.

[z] The Rape of *Helen*, and the Deſtruction of *Troy*, are not at this time, nor do exiſt in themſelves as Body and Void do, but are, as it were, the Events of Things, of Perſons, or of Places, for the Time paſt has carried off thoſe Men of whom thoſe Actions are Events.

more

Sed magis ut meritò possis EVENTA *vocare*
Corporis, atque Loci, res in quo quæque gerantur.
Corpora sunt porro partim Primordia rerum,
Partim Concilio quæ constant principiorum.
Sed quæ sunt rerum Primordia, nulla potest vis
Stringere; nam Solido vincunt ea corpora demum:
Et si difficile esse videtur credere quicquam
In rebus Solido reperiri corpore posse;
Transit enim Fulmen cœli per septa domorum,
Clamor ut, ac Voces: Ferrum candescit in igne:
Dissiliuntque fero ferventia Saxa vapore:
Conlabefactatus rigor Auri solvitur æstu:
Tum glacies Æris flamma devicta liquescit:
Permanat calor Argentum, penetraleque frigus
Quando utrumque, manu retinentes pocula ritè,
Sensimus infuso lympharum rore supernè:
Usque adeo in rebus Solidi nihil esse videtur.
Sed quia vera tamen ratio, naturaque rerum
Cogit, ades, paucis dum versibus expediamus,
Esse ea, quæ Solido atque æterno corpore constent,
Semina quæ rerum, Primordiaque esse docemus:
Unde omnis Rerum nunc constet Summa creata.
Principio quoniam duplex natura duarum
Dissimilis rerum longe constare reperta 'st
Corporis atque Loci, res in quo quæque geruntur;
Esse utramque sibi per se, puramque necesse 'st:
Nam quâcunque vacat Spatium, quod Inane vocamus;
CORPUS *eâ non est: quâ porro cunque tenet se*
Corpus, eâ vacuum nequaquam constat Inane.
Sunt igitur Solida, ac sine Inani Corpora prima.

Præterea

more juſtly called the Events of Body, and of Space, where Things are carried on.

Lastly, Bodies are either the firſt Seeds of Things, or formed by the uniting of thoſe Seeds. [a] The ſimple Seeds of Things no Force can ſtrain, their ſolid Parts will never be ſubdued. Tho' it is difficult, I own, to think that any Thing in Nature can be found perfectly ſolid; for Heaven's Thunder paſſes through the Walls of Houſes, juſt as Sound or Words; Iron in the Fire grows hot, and burning Stones fly into pieces by the raging Heat; the Stiffneſs of the Gold is looſed by Fire, and made to run; the hard and ſolid Braſs, ſubdued by Flames, diſſolves; the Heat and piercing Cold paſſes through Silver; both of theſe we find, as in our Hand we hold a Cup, and at the Top pour Water hot or cold: ſo nothing wholly ſolid ſeems to be found in Nature. But becauſe Reaſon and the fixed State of Things oblige me, hear, I beg, while in few Verſes we evince, that there are Beings that conſiſt of ſolid and everlaſting Matter which we call the Seeds, and the firſt Principles of Things, from whence the whole of Things begin to be.

The Seeds are Solid.

And, firſt, becauſe we find two Sorts of Things unlike in Nature, in themſelves diſtinct, *Body* and *Space*, 'tis neceſſary each ſhould be entire, and ſeparate in itſelf; for where there is a Space which we call *Void*, there Nothing is of Body; ſo where Body is, there Nothing is of empty Space: and therefore ſuch Things there are as Solids and firſt Seeds, which Nothing in them can admit of *Void*.

[a] He comes now to diſpute more at large concerning Bodies, which he divides into Simple and Compound, and aſſerts, that Simple Bodies, or the Principles of the Compounds, are moſt ſolid, perfectly full, and contain no Void; tho' he allows this is very hard to conceive.

Præterea quoniam genitis in rebus Inane 'ſt,
Materiem circum Solidam conſtare neceſſe 'ſt :
Nec res ulla poteſt vera ratione probari
Corpore Inane ſuo celare atque intus habere ;
Si non, quod cohibet, Solidum conſtare relinquas.
Id porro nihil eſſe poteſt, niſi Materiaï
Concilium, quod Inane queat rerum cohibere.
Materies igitur Solido quæ corpore conſtat,
Eſſe æterna poteſt, cum cætera diſſolvantur.
Tum porro ſi nil eſſet, quod Inane vacaret,
Omne foret Solidum ; niſi contra corpora cæca
Eſſent, quæ loca complerent, quæcunque tenerent :
Omne, quod eſt, Spatium vacuum conſtaret Inane.
Alternis igitur nimirum Corpus Inani
Diſtinctu 'ſt, quoniam nec Plenum naviter extat ;
Nec porro Vacuum : ſunt ergo corpora cæca,
Quæ Spatium Pleno poſſint diſtinguere Inane.
Hæc neque diſſolvi plagis extrinſecùs icta
Poſſunt : nec porro penitùs penetrata retexi ;
Nec ratione queunt alia tentata labare :
Id quod jam ſupera tibi paullo oſtendimus antè.
Nam neque conlidi ſine Inani poſſe videtur
Quicquam, nec frangi, nec findi in bina ſecando :
Nec capere humorem, neque item manabile frigus,
Nec penetralem ignem, quibus omnia conficiuntur.
Et quàm quæque magis cohibet res intus Inane,
Tam magis his rebus penitùs tentata labaſcit.
Ergo, ſi Solida, ac ſine Inani Corpora prima
Sunt, ita uti docui, ſint hæc Æterna neceſſe 'ſt.
Præterea, niſi Materies Æterna fuiſſet,

Antehac

Besides; becauſe in all created Things there is a *Void*, 'tis neceſſary ſome ſolid Matter ſhould ſtill include this *Void*; nor can you prove, by any Rule of Reaſon, that any Thing contains within it ſelf an empty Space, unleſs you will allow what holds it in is perfect ſolid; and this is Nothing elſe but the cloſe Union of firſt Seeds, which bind and do confine within themſelves this *Void*. Matter therefore compoſed of ſolid Parts eternal is, when all Things elſe muſt die.

Further, if there was no ſuch Thing as we call *Void*, every Thing would be ſolid; then again, unleſs there were ſome Things ſolid to fill up the Space they hold, all would be empty Space. Body from Space therefore is in itſelf diſtinct; for all is neither full, nor is all *Void*; and therefore there are ſolid Seeds which make a Difference between Full and Space.

These ſolid Seeds by no Force from without can be diſſolved, nor can they be deſtroyed by being pierced within, nor made to yield by any other Means, as proved before. For Nothing can be bruiſed without a *Void*, or broken or by Force be cleft in two, or receive Moiſture, or the piercing Cold, or ſearching Fire which all Things elſe deſtroys. And the more of *Void* the ſolid Seeds confine, the ſooner when they are ſtruck will they diſſolve, and fall to pieces[b]; therefore, if theſe firſt Seeds are ſolid, free from *Void*, they, as I ſaid, muſt be eternal, and from Death ſecure. *The Seeds are Eternal.*

Again, if Matter had not been eternal, [c]long before

[b] Having aſſerted the Solidity of his Atoms, he proves they are eternal; for Solids are perfectly full, contain no Void, and therefore are not ſubject to Diſſolution, or to a Separation and Diviſibility of Parts.

[c] If the firſt Seeds of Things were diſſolved, they would fall into Nothing; for there are no Principles, prior to the firſt, into

Antehac ad Nihilum penitus res quæque rediſſent ;
De Nihiloque renata forent quæcunque videmus.
At quoniam ſupera docui NIL *poſſe creari*
De Nihilo, neque quod genitu'ſt ad Nil revocari :
Eſſe immortali Primordia corpore debent,
Diſſolvi quo quæque ſupremo tempore poſſint ;
Materies ut ſuppeditet rebus reparandis.
Sunt igitur Solida Primordia ſimplicitate,
Nec ratione queunt alia ſervata per ævum
Ex infinito jam tempore res reparare.
Denique, ſi nullam finem Natura parâſſet
Frangendis rebus, jam Corpora materiaï
Uſque redacta forent, ævo frangente priore,
Ut nihil ex illis à certo tempore poſſet
Conceptum, ſummum ætatis perviadere florem :
Nam quidvis citiùs diſſolvi poſſe videmus,
Quam rurſus refici. Quapropter longa diei
Infinitæ ætas anteacti temporis omnis
Quod fregiſſet adhuc, diſturbans, diſſolvenſque,
Id nunquam reliquo reparari tempore poſſet :
At nunc nimirum frangendi reddita finis
Certa manet : quoniam refici rem quamque videmus,
Et finita ſimul generatim tempora rebus
Stare, quibus poſſint ævi contingere florem.

Hæc

before now all Beings had return'd to Nothing, and each Being we behold again had been reſtored from Nothing; but, as before I proved, Nothing from Nothing can be made, and what was once in Being can ne'er to Nothing be reduced; it follows, thoſe firſt Seeds muſt be compoſed of Principles immortal, into which at laſt each Being muſt diſſolve, and thence ſupply an everlaſting Stock of Matter to repair the Things decay'd. Theſe firſt Seeds therefore are ſolid and ſimple, elſe they could not laſt entire through Ages paſt and infinite, to repair Beings periſhed and diſſolv'd.

But ſtill, [d] if Nature had prefix'd no Bounds in breaking Things to pieces, the Parts of Matter, broken by every paſſing Age, had been reduced ſo ſmall, that Nothing could of them be form'd that would in any time become mature; for Things we ſee much ſooner are diſſolv'd than are again reſtored; and therefore what an infinite Tract of Ages paſt has broken, and ſeparated and diſſolv'd, in future Time can never be repaired; ſo that certain Bounds of breaking and dividing muſt be ſet, becauſe we ſee each Being is repaired, and ſtated Times are fixed to every Thing in which it feels the Flower of its Age.

into which they can be reſolved; and thus the Things that are daily born would ariſe from Nothing; it muſt therefore be allowed either that the Seeds are eternal, or that Things proceed from Nothing, which the Philoſophers held as the greateſt Abſurdity.

[d] The Seeds of Things are of a fixed Magnitude, and indiſſoluble; for had they been broken and waſted for ſo vaſt a Tract of Time as is already paſt, they would have been reduced into Parts ſo extremely ſmall, that they could never in any Length of Years, and therefore not in a few, be re-united and made up again into one Maſs.

Huc accedit, uti Solidissima materiaï
Corpora cum constant, possint tamen omnia reddi
Mollia, quæ fiant, Aër, Aqua, Terra, Vapores,
Quo pacto fiant, & qua vi cunque genantur;
Admistum quoniam simul est in rebus Inane.
At contra, si Mollia sint Primordia rerum,
Unde queant validi silices, ferrumque creari,
Non poterit ratio reddi. Nam funditus omnis
Principio fundamenti Natura carebit.
Sunt igitur Solida pollentia simplicitate,
Quorum condenso magis omnia conciliatu
Arctari possunt, validasque ostendere vireis.
Denique jam quoniam generatim reddita finis
Crescendi rebus constat, vitamque tuendi,
Et quid quæque queant per fœdera Naturaï,
Quid porro nequeant sancitum quandoquidem exstat:
Nec commutatur quicquam, quin omnia constant,
Usque adeo, variæ volucres ut in ordine cunctæ
Ostendant maculas generaleis corpori inesse:
Immutabile materiæ quoque corpus habere
Debent nimirum. Nam si Primordia rerum
Commutari aliqua possent ratione revicta,
Incertum quoque jam constet, quid possit oriri,
Quid nequeat; finita potestas denique quoique
Quanam sit ratione, atque altè terminus hæreat;

AND yet, [e] though the firſt Seeds of Things are ſolid, all Beings that are compounded, ſuch as Air and Water, Earth and Fire, may be ſoft, (however made, or by what Power form'd) and from them be produced, becauſe there is a Void ſtill mix'd with Things; and, on the contrary, if theſe firſt Seeds were ſoft, what Reaſon can there be aſſign'd whence hardned Flints and Iron could be form'd, for Nature would want the proper Principles to work upon; and therefore theſe firſt Seeds muſt ſimple Solids be, by whoſe Union cloſe and compact all Things are bound up firm, and ſo diſplay their Strength and hardy Force. *Whence proceeds Softneſs.*

AGAIN, [f] becauſe each Being in its Kind has certain Bounds prefix'd to its Increaſe, and to the Preſervation of its Life, and ſince by Nature's Laws it is ordained to each how far their Powers to act or not extend; ſince Nothing changes, and every Thing goes on as it began, each Kind of Birds, moſt ſteady in their Courſe, ſhew the ſame Colours painted on their Wings, the Principles of Matter whence they ſpring muſt be fix'd and unchangeable; if the Seeds of Things could change by any Means, 'twould be unknown what could be form'd, what not; by what Means every Being is limited, and ſtops ſhort within the Bounds it cannot break; nor could

[e] Soft Bodies may be compounded of ſolid Seeds by the Intermixture of Void; but if the Seeds were ſoft, how hard Bodies ſhould be made from them is impoſſible to conceive.

[f] How could Animals carry always upon them the diſtinguiſhing Marks of their ſeveral Kinds, if they were not formed of Principles not liable to Change or Diſſolution? If the Seeds could be changed or diſſolved, neither Men nor any other Animals would retain their uſual Shapes; ſome would enjoy a prodigious Strength and Length of Days, while others of the ſame Kind would be puny and ſhort-lived. We ſhould ſee frequently white Crows, and ſometimes black Swans.

Nec toties poſſent generatim ſæcla referre
Naturam, motus, victum, moreſque parentum.
Tum porro, quoniam extremum cujuſque cacumen;
Corporis eſt aliquod, noſtri quod cernere ſenſus
Jam nequeunt, id nimirum ſine partibus exſtat,
Et Minima conſtat natura; nec fuit unquam
Per ſe ſecretum, neque poſthac eſſe valebit;
Alterius quoniam eſt ipſum pars, primaque, & ima:
Inde aliæ, atque aliæ ſimiles ex ordine partes
Agmine condenſo naturam Corporis explent.
Quæ quoniam per ſe nequeunt conſtare neceſſe 'ſt
Hærere, ut nequeant ulla ratione revelli.
Sunt igitur Solida Primordia ſimplicitate;
Quæ minimis ſtipata cohærent partibus arctè.
Non ex ullorum conventu conciliata,
Sed magis æterna pollentia Simplicitate:
Unde neque avelli quicquam, neque diminui jam
Concedit Natura reſervans ſemina rebus.
Præterea, niſi erit Minimum, Parviſſima quæque
Corpora conſtabunt ex partibus Infinitis;
Quippe ubi dimidiæ partis pars ſemper habebit
Dimidiam partem, nec res perfiniet ulla:
Ergò rerum inter ſummam, minimamque qui eſcit?

Non

the Courſe of Time in every Age, the Nature, Motion, Diet, and the Manners of the old Sire impreſs upon the Young.

Besides, [g] becauſe the utmoſt Point or the Extreme of every *Body* ſomething is the Eye cannot diſcern, it is not made of Parts, but is in Nature what we call the *Leaſt*; which ne'er exiſts of itſelf, divided from Body, nor ever can, becauſe it is the very Firſt and Laſt of ſomething elſe. For 'tis by heaping up ſuch Parts as theſe, one by another, that complete the Being of every *Body*. Since then they can't ſubſiſt apart, and ſeparate, they muſt needs ſtick cloſe, nor be divided by the utmoſt Force. Theſe Seeds therefore are in their Nature ſolid, and ſimple, form'd of ſmalleſt Parts bound cloſe; not tied together by united Seeds of various Kinds, but in themſelves entire, eternally unmix'd and pure, from which Nature will ſuffer Nothing to be forced or leſſened, reſerving them as firſt Seeds, to form and to repair thoſe Things that die.

Again, [h] ſuppoſe there was no *Leaſt*, the ſmalleſt Bodies muſt be compoſed of Parts boundleſs and infinite; the Half of every Being muſt then contain another Half, ſo there would be no End of ſtill dividing; and where would be the Difference between the ſmalleſt and the largeſt Bo- *Atoms.*

[g] Every Seed is of neceſſity ſimple and indiſſoluble, becauſe it conſiſts of Parts even the leaſt that can be conceived, and which no Art or Strength can disjoin, becauſe no Art or Strength can reduce into Nothing; for Nothing goes into Nothing.

[h] The firſt Seeds are eternal and not to be diſſolved, not becauſe they are deſtitute of Parts, but becauſe they are ſolid, and therefore cannot be broken in pieces, nor divided by the greateſt Force. Theſe Parts have no Parts, and are purely Mathematical; for unleſs ſuch *Leaſts* are allowed, there would be no Inequality between the greateſt and the ſmalleſt Things, becauſe either of them would contain infinite Parts alike; and thus both of them would be infinite, which is abſurd.

Non erit ut diſtent: nam quamvis funditus omnis
Summa ſit Infinita, tamen Parviſſima quæ ſunt,
Ex Infinitis conſtabunt partibus æquè,
Quoi quoniam ratio reclamat vera, negatque
Credere poſſe animum, victus fateare neceſſe 'ſt,
Eſſe ea quæ nullis jam prædita partibus exſtent,
Et Minima conſtent natura. Quæ quoniam ſunt,
Illa quoque eſſe tibi Solida, atque Æterna fatendum.
Denique ni Minimas in parteis cuncta reſolvi
Cogere conſuêſſet rerum Natura creatrix,
Jam nihil ex illis eadem reparare valeret:
Propterea quia, quæ multis ſunt partibus aucta,
Non poſſunt ea, quæ debet Genitalis habere
Materies, varios Connexus, Pondera, Plagas,
Concurſus, Motus, per quæ res quæque geruntur.
Porro, ſi nulla 'ſt frangendis reddita finis
Corporibus, tamen ex æterno tempore quædam
Nunc etiam ſuperare neceſſe 'ſt Corpora rebus,
Quæ nondum clueant ullo tentata periclo:
At quoniam fragili natura prædita conſtant,
Diſcrepat æternum tempus potuiſſe manere
Innumerabilibus plagis vexata per ævum.
Quapropter, qui Materiem rerum eſſe putârunt
Ignem, atque ex igni Summam conſiſtere ſolo

dies? None in the leaſt; for though the whole be intirely infinite, yet Bodies that are ſmalleſt would contain infinite Parts alike, which, ſince true Reaſon exclaims againſt, nor will allow the Mind to give aſſent, you muſt, convinced, profeſs that there are Bodies which are void of Parts, and are by Nature *Leaſt*; ſince ſuch there are, you muſt admit them Solid and Eternal.

Lastly, [i] if Nature, Parent of Things, had not compelled all Things that periſh then to be reſolv'd into *Leaſt* Parts, ſhe could from them repair Nothing that dies; for Bodies that are form'd of various Parts can never be endued with Properties, which the firſt Seeds of Things ought to poſſeſs, as Union, Weight, and Force, Agreement, Motion, by which all Things act.

And yet, [k] ſuppoſe that Nature had allowed no End to Bodies being divided, yet ſome Bodies from Eternity muſt have been, which by no Force could ever be ſubdued. But Bodies that are form'd of brittle Seeds, and to be broken, could not have remained for Ages infinite, vexed as they have been with endleſs Blows, but muſt have been diſſolv'd.

Wherefore, thoſe Sages who have thought that Fire is the firſt Principle of Things, and from that alone the whole is form'd, do greatly

[i] If Nature did not leſſen even to the minuteſt Mites, the Matter of which Things are formed would be unfit to undergo thoſe Changes, and receive thoſe Figures, to which it muſt be expoſed; for if thoſe minute Bodies were formed of ſeveral Parts, and contained within them any Void, they would not be endued with an equal Weight, or uniform Motion; and therefore could never be united together.

[k] If there were no Solids which could not be diſſolved, where can we find thoſe Bodies that from Eternity have remained unbroken? for frail Atoms, that for ſo long a Tract of Time have been expoſed to infinite Strokes and Blows, muſt of neceſſity have been diſſolved.

Magnopere à vera lapsi ratione videntur.
HERACLITUS *init quorum dux prælia primus,*
Clarus ob obscuram linguam magis inter inaneis,
Quàmde graveis inter Graïos, qui vera requirunt.
Omnia enim Stolidi magis admirantur, amantque
Inversis quæ sub verbis latitantia cernunt:
Veraque constituunt, quæ bellè tangere possunt
Aureis, & lepido quæ sunt fucata sonore.
Nam cur tam variæ res possent esse, requiro,
Ex vero si sunt Igni, puroque creatæ?
Nil prodesset enim calidum denserier Ignem,
Nec rarefieri, si partes Ignis eandem
Naturam, quam totus habet super Ignis, haberent.
Acrior Ardor enim conductis partibus esset:
Languidior porro disjectis, disque supatis.
Amplius hoc fieri nihil est, quod posse rearis
Talibus in causis, nedum variantia rerum
Tanta queat densis rarisque ex Ignibus esse.
Atque HI *si faciant, admistum rebus Inane;*
Denseri poterunt Ignes, rarique relinqui:
Sed, quia multa sibi cernunt contraria, mussant,
Et fugitant in rebus Inane relinquere purum, &,
Ardua dum metuunt, amittunt vera viaï:
Nec rursum cernunt exempto rebus Inani,
Omnia denseri, fierique ex omnibus unum

Corpus,

err from the true Rule of Reaſon. The Champion of theſe, [l] *Heraclitus*, enters firſt the Liſts, more famed for dark Expreſſion among empty *Greeks*, than with the Wiſe, who ſearch for Truth; for none but Fools admire, and love what they ſee couch'd in Words abſtruſe; and that they take for Truth which quaintly moves the Ear, and painted o'er affects by witty Jingling of the Sound. *Againſt* Heraclitus.

For how ſuch various Beings could ariſe, I aſk, if form'd from pure and real Fire? To ſay, [m] that the hot Fire is now condens'd, and ſometimes rarified, would nought avail; the ſeveral Parts muſt ſtill retain the Nature of Fire, the ſame which the Fire had when whole; the Heat would be more fierce, the Parts condens'd, more languid when divided and made rare. There's nothing more than this you can derive from Cauſes ſuch as theſe, much leſs ſo great Variety of Things can be produced from Fire or Flame, condenſed or made rare.

Indeed, would they admit in Things a *Void*, Fire then might be condens'd or rarified; but This, becauſe it contradicts their Schemes, they murmur at, and will allow in Things no empty *Space:* So, while they fear to grant this difficult Truth, they loſe the Way that's right, nor do they ſee, by not allowing there is in Things a *Void*, all Bodies would be denſe, and out of all one only would be

[l] He taught, that all Things are made of Fire, and reſolv'd again into Fire; and tho' the Poet ſingles out this Philoſopher, he takes it for granted, that his Arguments conclude as ſtrongly againſt others; ſince whatever oppoſes this Doctrine of Fire, will equally hold good againſt the Air, or any other of the Elements.

[m] *Heraclitus* aſſerted, that Fire, by being condenſed, grows moiſt, and ſo becomes Air; and the Air, by Compreſſion, becomes Water; which Water, by Condenſation, is turned into Earth: But this is not proved; for the more the Fire is condenſed, the more it is Fire, and the Rarifaction is nothing to the purpoſe; for rarify Fire as much as you will, it will ſtill be Fire.

Corpus, nil ab se quod possit mittere raptim,
Æstifer Ignis uti lumen jacit, atque vaporem :
Ut videas non è stipatis partibus esse.
Quod si fortè ulla credunt ratione potesse
Igneis in cœtu stingui, mutareque corpus ;
Scilicet ex ulla facere id si parte reparcent,
Occidet ad Nihilum nimirum funditus Ardor
Omnis, & ex Nihilo fient quæcunque creantur.
Nam quodcunque suis mutatum finibus exit,
Continuò hoc mors est illius, quod fuit ante ;
Proinde aliquid superare necesse 'st incolume olli,
Ne tibi res redeant ad Nilum funditus omnes,
De Nihiloque renata viresçat copia rerum.
Nunc igitur, quoniam certissima corpora quædam
Sunt, quæ conservant naturam semper eandem,
Quorum abitu, aut aditu, mutatoque ordine, mutant
Naturam res, & convertunt corpora sese ;
Scire licet non esse hæc Ignea corpora rerum.
Nil referret enim quædam decedere, abire,
Atque alia attribui, mutarique ordine quædam,
Si tamen Ardoris naturam cuncta tenerent.
Ignis enim foret omnimodis, quodcunque crearent.
Verùm, ut opinor, ita 'st : Sunt quædam Corpora,
quorum

Concursus,

made, which could by force emit Nothing without it ſelf, as the hot Fire emits both Light and Heat, which ſhews it is not compoſed of crouded Parts, without a *Void*.

But if they think, that [n] Fire in all its Parts may be extinguiſh'd, and ſo its Body change; if they inſiſt that This may once be done, then the whole Fire muſt be reſolv'd to Nothing, and Things new-form from Nothing muſt ariſe; for whatſoever is chang'd, and breaks the Bounds of its firſt Nature, dies, and is no more what firſt it was: ſome Seeds of Beings therefore muſt ſtill remain whole and unhurt, leſt Things to Nothing ſhould perfectly return; and then revive, and ſhould again from Nothing be reſtored.

But now, ſince there remain ſome certain Seeds that keep their Nature ſtill the ſame, whoſe Abſence or their Preſence, and their Change of Order change the Nature of compound Bodies, you muſt not think that theſe [o] firſt Seeds are fiery; if they were, what would it ſignify what Seeds are abſent, or what retire, what others take their place, how others may their Rank and Order change, ſince All would ſtill be in their Nature Fire, and Beings form'd from Them muſt wholly be of Fire? But, as I think, the Caſe is thus: Some certain Seeds there are by

[n] If Fire be a ſimple and uncompounded Thing, of which all Things are made, it cannot change without totally periſhing; a compound Body may change, and aſſume another State, but a Body uncompounded, if it loſes its firſt Nature, entirely dies.

[o] The firſt Seeds are not fiery in their own Nature; if they were, neither adding, detracting, nor tranſpoſing them, would ſignify nothing to produce any Effect: for if the Nature of Fire ſtill continued ſafe, nothing but Fire can be made of it. He ſays further, that certain Corpuſcles, whoſe Form cannot be perceived by Senſe, are the firſt Principles of Things, from whoſe meeting and uniting in various Manners, Fire and all Things elſe are produced.

Concurſus, Motus, Ordo, Poſitura, Figuræ,
Efficiunt Ignes, mutatoque ordine mutant
Naturam; neque ſunt Igni ſimulata, neque ullæ
Præterea reii, quæ corpora mittere poſſit
Senſibus, & noſtros adjectu tangere tactus.
Dicere porro Ignem res omneis eſſe, neque ullam
Rem veram in numero rerum conſtare, niſi Ignem,
Quod facit HIC IDEM, *perdelirum eſſe videtur.*
Nam contra Senſus ab Senſibus ipſe repugnat:
Et labefactat eos, unde omnia credita pendent:
Unde hic cognitus eſt ipſi, quem nominat Ignem.
Credit enim Senſus Ignem cognoſcere verè,
Cætera non credit, nihilo quæ clara minus ſunt:
Quod mihi cum vanum, tum delirum eſſe videtur.
Quo referemus enim? Quid nobis certius ipſis
Senſibus eſſe poteſt, quo vera ac falſa notemus?
Præterea, quare quiſquam magis Omnia tollat,
Et velit Ardoris naturam linquere ſolam,
Quam neget eſſe Ignis, Summam tamen eſſe relinquat?
Æqua videtur enim dementia dicere utrumque.
Quapropter qui Materiem rerum eſſe putârunt
Ignem, atque ex Igni Summam conſiſtere poſſe:
Et qui principium gignundis Aëra rebus
Conſtituêre: aut Humorem quincunque putârunt
Fingere res ipſum per ſe: Terramve creare

whoſe Concuſſion, Motion, Order, Site, and Figure, Fire is form'd; and when their Order is chang'd, they change the Nature of this Fire; but theſe firſt Seeds have nothing fiery in themſelves, nor of ſuch a Nature are they, as to ſend forth Bodies to be perceiv'd by Senſe, or be the Object of our Touch.

[p] And now to ſay that every Thing is Fire, that no true Thing in Nature does exiſt but Fire, as this Man does, is Madneſs all; he contradicts his Senſes by his Senſe, and overthrows thoſe Teſts of Truth by which all Things are known: For 'tis by Them we know that Thing which he calls Fire, and this Senſe concludes, it truly knows the Nature of this Fire; but then all other Things it will deny, which equally are true. This is to me a vain and fooliſh Way to judge; for to what ſhall we apply? And what can be more ſure than are our Senſes to us, by which we fully know Falſhood and Truth?

Besides, why any one ſhould all Things elſe diſclaim, and only Fire allow, or ſay there's no ſuch Thing as Fire, and all Things elſe allow, either of theſe is vain, and equal Madneſs to believe.

Wherefore, [q] thoſe Sages who contend that Fire is the firſt Principle, and that of Fire all Things conſiſt, and thoſe who make the Air the firſt Seeds of Bodies, and ſuch who ſay the Water is the ſole Cauſe of Beings, or that the Earth

[p] *Heraclitus* confeſſes, he knows Fire by the Help of his Senſes; *Lucretius* urges, that by his Senſes he diſcovers other Things beſides Fire. The Philoſopher never denied, but that other Things beſides Fire appeared, but he would not allow them to be; the Poet inſiſts, that other Things beſides Fire truly are, and that the Senſes evidently diſcover them to be.

[q] *Heraclitus* held, that Fire, *Anaximenes Mileſius*, that Air, *Thales Mileſius*, that Water, and *Pherecydes*, that Earth was the firſt Principle of all Things.

all

Omnia, & in rerum naturas vertier omneis:
Magnoperè à vero longéque errâſſe videntur.
Adde etiam qui conduplicant primordia rerum,
Aëra jungentes Igni, Terramque Liquori:
Et qui Quatuor ex rebus poſſe omnia rentur,
Ex Igni, Terra, atque Anima procreſcere, & Imbri:
Quorum Acragantinus cum primis EMPEDOCLES *eſt:*
Inſula quem Triquetris terrarum geſſit in oris:
Quam fluitans circum magnis amfractibus æquor
Ionium glaucis aſpergit virus ab undis:
Anguſtoque fretu rapidum mare dividit undis
Italiæ terraï oras à finibus ejus:
Hîc eſt vaſta Charybdis, & hîc Ætnæa minantur
Murmura flammarum rurſum ſe conligere iras,
Faucibus eruptos iterum ut vis evomat igneis:
Ad cœlumque ferat flammaï fulgura rurſum:
Quæ cùm magna modis multis miranda videtur
Gentibus humanis regio, viſendaque fertur,
Rebus opima bonis, multa munita virûm vi:
Nil tamen hoc habuiſſe Viro præclarius in ſe,
Nec ſanctum magis, & mirum, carumque videtur.
Carmina quin etiam divini pectoris ejus
Vociferantur, & exponunt præclara reperta;
Ut vix humana videatur ſtirpe creatus.
Hic tamen, & ſupera, quos diximus, inferiores
Partibus egregiè multis, multoque minores,
Quanquam multa benè, ac divinitùs invenientes

Ex

all Things creates, and can infuſe itſelf into the Nature of all Things, do ſtrangely err, and wander wide from Truth.

Things are not made of four Elements.

And ſo do thoſe who double the firſt Elements of Things, and to produce all Beings, join the Air to Fire, the Earth to Water, or believe that from all Four all Beings are produced, and ſpring from Air, and Water, Earth and Fire.

Empedocles.

The Chief of theſe we rank [r] *Empedocles* of *Agrigentum*, born in *Sicily*, the Iſland famed for its three Promontories, whoſe Sides the *Ionian* Sea flows all around, with mighty Windings, from whoſe Coaſts the Sea, by a narrow Frith, divides the Bounds of *Italy*. Here is the fierce *Charybdis*, here *Ætna* roars, and threatens loud to ſuck in Flames of Vengeance, with greater Force to belch them out again, burſt from his Jaws, and throw the flaſhing Fire high as the Sky. This Iſland, tho' renown'd by Men for many Things, and worth their Sight, rich in the beſt Advantages of Life, by mighty Men defended, yet produced Nothing more glorious than this One great Man, Nothing more venerable, admired, and dear. Beſides his Verſe, that from his Soul Divine flows ſweetly, ſo clearly proves, and ſo explains the noble Secrets he has found, he ſeems ſcarce born of Human Race, but from the Gods.

Yet He, with others of inferior Note we named before, remarkably, by great Degrees, and much below him, tho' theſe have ſucceeded well in their Search, and many Things have found as if

[r] The Son of *Meton*, born at *Agrigentum* in *Sicily*, who taught that all Things were formed of the four Elements, *Fire*, *Water*, *Air*, and *Earth*. Whatever *Lucretius* objects againſt his Doctrine, will conclude likewiſe againſt thoſe who hold, that Things are produced from two or three Elements only; for if four cannot be thought ſufficient, much leſs will a fewer Number ſuffice.

inſpired,

Ex adyto tanquam cordis responsa dedêre
Sanctiùs, & multò certa ratione magis, quam
Pythia, quæ tripode ex Phœbi, lauroque profatur;
Principiis tamen in rerum fecere ruinas,
Et graviter Magni magno cecidere ibi casu:
Primum, quod motus, exempto rebus Inani,
Constituunt, & res molleis, rarasque relinquunt,
Aëra, Solem, Ignem, Terras, Animalia, Fruges:
Nec tamen admiscent in eorum corpus Inane.
Deinde quod omnino finem non esse secandis
Corporibus faciunt, neque pausam stare fragori;
Nec prorsum in rebus Minimum consistere quicquam:
Cum videamus id extremum cujusque cacumen
Esse quod ad sensus nostros Minimum esse videtur:

Conjicere

inſpired, and have pronounced their Oracles (from the moſt cloſe Receſſes of their Souls) much more Divine, and founded more on Reaſon than *Pythia*, ſacred Propheteſs, from *Tripod*, or from *Apollo*'s Laurel ever ſpoke. Yet they have made ſad Havock, when they ſearch into the Principles of Things, and fell with this Great Man's Miſtakes together with Him.

And firſt, [s] becauſe, denying there is *Void* in Bodies, they admit of Motion, and allow that Things are ſoft or rare; as the Air, the Sun, the Fire, the Earth, the Creatures, Fruits, and yet will mix no empty Space in the Contexture of Bodies that are form'd.

And then they ſet no Bounds to Bodies being divided, nor will admit an End to Blows that break their Frame; nor will they grant that ſuch a Thing as *Leaſt* is found in Bodies, when we plainly ſee that every Being has a Part, a Point that utmoſt lies, and obvious to our Senſe, which is the Leaſt of all; and thence conclude, that ut-

[s] He objects againſt the Philoſophers, firſt, that they admit of Motion, of Rareneſs and Softneſs, and yet deny a *Void*. Secondly, that they aſſert all Bodies to be infinitely diviſible, which he oppoſes. Thirdly, that their firſt Seeds are ſoft, and conſequently ſubject to change; and if they could change, they muſt be annihilated: but he has proved before, that Nothing proceeds or returns to Nothing. Fourthly, that the Elements they ſet up are contrary to one another, and therefore will mutually deſtroy one another, at leaſt they can never unite in the Compoſition of Bodies. He obſerves, fifthly, that if they ſay the Elements loſe their Nature, when they are changed into Things, and that Things are again changed into them, in this Caſe he ſays, the Elements are not more properly the Principles of Things, than Things are the Principles of the Elements. If they ſay the Elements ſtill retain their Nature, he inſiſts, that Nothing of one Species, and of one Name, could then be produced, but only a certain rude and undigeſted Maſs of Fire, Air, Earth, and Water; as of the Things of Gold, Silver, Tin, and Braſs, Nothing can ever be made but a Heap of Gold, Silver, Tin, and Braſs.

moſt

Conjicere ut possis ex hoc, quod cernere non quis,
Extremum quod habent, Minimum consistere rebus.
Huc accedit item, quod jam primordia rerum
Mollia constituunt, quæ nos nativa videmus
Esse, & mortali cum corpore funditus; atqui
Debeat ad Nihilum jam rerum Summa reverti,
De Nihiloque renata virescere copia rerum:
Quorum utrumque quid à vero jam distet, habebas.
Deinde inimica modis multis sunt, atque venena
Ipsa sibi inter se: Quare aut congressa peribunt,
Aut ita diffugient, ut tempestate coorta,
Fulmina diffugere, atque Imbreis Ventosque videmus.
Denique Quatuor ex rebus si cuncta creantur,
Atque in eas rursum res omnia dissolvuntur,
Quî magis illa queunt rerum Primordia dici,
Quam contra res illorum, retroque putari?
Alternis gignuntur enim, mutantque colorem,
Et totam inter se naturam tempore ab omni:
Sin ita fortè putas, Ignis, Terræque coire
Corpus, & Aërias auras, Roremque liquorum,
Nil in concilio naturam ut mutet eorum:
Nulla tibi ex illis poterit res esse creata,
Non Animans, non Exanimo quid corpore, ut Arbos:
Quippe suam quidque in cœtu variantis acervi
Naturam ostendet, mistusque videbitur Aër
Cum Terra simul, atque Ardor cum Rore manere:
At Primordia gignundis in rebus oportet
Naturam Clandestinam, cœcamque adhibere,
Emineat nequid, quod contra pugnet & obstet,
Quò minùs esse queat propriè, quodcunque creatur.

moſt Point is that ſame *Leaſt* in Things too ſmall to be diſcover'd by the Sight.

Besides, theſe Men make their Principles of Things conſiſt of ſoft Seeds, which we ſee are born, and altogether mortal in their Frame; if ſo, the whole of Things muſt have return'd to Nothing, and be again from thence reſtored; how diſtant both from Truth you have heard before.

And then ſuch Seeds are many times at war among themſelves, and Poiſon to each other, and ſo will periſh in the Attack, or fly ſcatter'd, as in a Tempeſt we obſerve the Thunder, and the Showers and Wind diſperſe.

Lastly, if all Things from four Elements are form'd, and into them are finally diſſolv'd, why ſhould they rather the firſt Principles of Things be called, than Things the Principles of them? For they are produced alternately, are ever changing their Form and their whole Nature mutually into each other; but if by chance you think the Body of the Fire and Earth is joined, that Air is joined to Water, and thus united, each Element preſerves its Nature ſtill entire; Nothing from Seeds like theſe could have been form'd, not Men, nor Things inanimate, as Trees: For every Element in this various Heap of Matter, ever changing, would diſplay its proper Nature ſtill; you'd ſee the Air mix'd with the Earth, and Fire with Water joined. But the firſt Principles whence Things are form'd ſhould be in Nature cloſe and undiſcern'd, that Nothing might appear, which ſhould oppoſe or jar, and thus prevent the compound Body from being uniform, and make it conſiſt of Parts diſſimilar, confuſed and void.

Quin etiam repetunt à cælo, atque ignibus ejus
Et primum faciunt Ignem se vertere in Auras
Aëris: hinc Imbrem gigni, Terramque creari
Ex Imbri, retroque à Terra cuncta reverti,
Humorem primum, post Aëra, deinde Calorem:
Nec cessare hæc inter se mutare, meare
De Cælo ad Terram, de Terra ad Sidera Mundi:
Quod facere haud ullo debent primordia pacto.
Immutabile enim quiddam superare necesse 'st;
Ne res ad Nihilum redigantur funditus omnes.
Nam quodcunque suis mutatum finibus exit,
Continuò hoc mors est illius, quod fuit antè,
Quapropter, quoniam quæ paullo diximus antè,
In commutatum veniunt, constare necesse 'st
Ex aliis ea, quæ nequeant convertier unquam:
Ne tibi res redeant ad Nihilum funditus omnes.
Quin potiùs tali natura prædita quædam
Corpora constituas, Ignem si forte creârint,
Posse eadem demptis paucis, pauciſque tributis,
Ordine mutato, & motu, facere Aëris auras:
Sic alias aliis rebus mutarier omneis.
At manifesta palam res indicat, inquis, in auras
Aëris è Terra res omnes crescere, alique;

Et

Besides [t], Philoſophers like Theſe derive their Tranſmutation from Celeſtial Fire; and firſt, they make this Fire to change to Air, from Air is Water form'd, the Earth from Water; and then again, from Earth theſe Elements return, firſt Water, then the Air, and laſt the Fire. Nor do theſe conſtant Changes ever ceaſe among themſelves, but ſtill proceed from Heaven to Earth, from Earth to Stars, that light the World. But the firſt Seeds of Things muſt by no means be thus diſpoſed; ſomething immutable muſt needs remain, leſt Things ſhould utterly to Nothing be reduced: For whatſoever ſuffers a Change, by paſſing o'er the Bounds of its firſt Nature, dies, and is no more what it firſt was. Thoſe Elements therefore, which, as we ſaid above, admit of Change, muſt needs conſiſt of other Seeds which never can change at all, leſt Things ſhould utterly to Nothing be reduced: Then rather ſay, there are ſome certain Principles in Nature which are the Seeds of Fire, ſuppoſe, and ſome of theſe being taken away, or elſe by adding more, by changing of their Order or their Motion, they compoſe the Air, and ſo all other Beings may be produced by Changes ſuch as Theſe.

[u] But you ſay, that common Fact does clearly ſhew, that all Things grow, and riſe into the Air,

[t] *Empedocles* and his Followers taught, that the Elements are continually preying upon and robbing one another; but the Poet urges, that if the Principles change, they will fall into Nothing; and therefore, ſince they allow the Elements are chang'd, they cannot be the firſt Principles of Things: For Nothing comes from Nothing, and therefore, there muſt be an immutable Matter, which being variouſly moved, produced now Fire, now Air, now Earth, now Water.

[u] He raiſes an Objection, that Plants and all Animals grow, and are nouriſhed by the four Elements; and therefore are ſaid to be the Principles of all Things: but he replies, that they

Et nisi tempestas indulget tempore fausto,
Imbribus, & tabe nimborum arbusta vacillant.
Solque sua pro parte fovet, tribuitque calorem:
Crescere non possunt Fruges, Arbusta, Animantes.
Scilicet: & nisi nos Cibus aridus, & tener Humor
Adjuvet, amisso jam corpore, vita quoque omnis
Omnibus è nervis atque ossibus exsolvatur:
Adjutamur enim dubio procul, atque alimur nos
Certis ab rebus, certis aliæ atque aliæ res.
Nimirum quia multa modis communia multis
Multarum rerum in rebus Primordia mista
Sunt, ideo variis variæ res rebus aluntur.
Atque eadem magni refert Primordia sæpe
Cum quibus, & quali positura contineantur:
Et quos inter se dent motus, accipiantque.
Namque eadem Cœlum, Mare, Terras, Flumina, Solem
Constituunt; eadem Fruges, Arbusta, Animanteis:
Verùm aliis, alioque modo commista moventur.
Quin etiam passim nostris in Versibus ipsis
Multa Elementa vides multis communia verbis:
Cum tamen inter se Versus, ac verba necesse 'st
Confiteare & re, & sonitu distare sonanti:
Tantum Elementa queunt permutato ordine solo:
At rerum quæ sunt Primordia, plura adhibere
Possunt, unde queant variæ res quæque creari.

Nunc

Air, and are ſupported by the Earth; and unleſs the Seaſon, in happy Time, indulges Rain, and ſhakes the Trees with driving Showers, unleſs the Sun, on his Part, cheriſhes and gives his Heat, nor Fruits, nor Trees, nor Creatures could increaſe. 'Tis true, but theſe are not firſt Seeds; and we likewiſe, unleſs dry Food and kindly Juice preſerve our Bodies, they muſt periſh, and every Spark of Life, out of our Nerves and Bones, muſt be extinct. We are upheld, no doubt, and nouriſhed by certain Means; and other Things are ſtaid by certain others; for many common Principles of many Things are mix'd in each. And therefore, the various kind of Things we find ſupported in a different manner; but yet it much concerns with what, and in what Order, theſe firſt Seeds unite, and what Motion they give and take among themſelves; for the ſame Seeds compoſe Heaven, Earth, the Sea, the Rivers, and the Sun, the ſame compoſe the Creatures, Fruits, and Trees, they differ only as they are moved by others, and as their Mixture differs in themſelves.

So, in theſe Lines of mine, the many Letters you ſee are common to the Make and Form of many Words; and yet, you muſt confeſs, the Verſes and the Words are much unlike in Senſe and Sound: Such is the Force of Letters, by Change of Order only. But the firſt Seeds of Things being more, muſt needs admit of Changes more different; from whence proceeds that great Variety of Things we ſee produced.

are no more the Principles than Wine, Wheat, and other Things, by which we ſupport Life; for Things that nouriſh are not therefore Principles, but Thoſe from which they receive a Contexture, which makes them fit Nouriſhment for Things.

Nunc & ANAXAGORÆ scrutemur Homæomeriam,
Quam Græci memorant, nec nostra dicere lingua
Concedit nobis patrii sermonis egestas:
Sed tamen ipsam rem facile 'st exponere verbis,
Principium rerum quam dicit Homæomeriam:
Ossa videlicet è pauxillis atque minutis
Ossibu': sic & de pauxillis atque minutis
Visceribus Viscus gigni: Sanguenque creari,
Sanguinis inter se multis coëuntibu' guttis:
Ex Aurique putat micis consistere posse
Aurum: & de Terris Terram concrescere parvis:
Ignibus ex Ignem: Humorem ex Humoribus esse:
Cætera consimili fingit ratione, putatque.
Nec tamen esse ulla parte IDEM in rebus Inane
Concedit, neque corporibus finem esse secandis:
Quare in utraque mihi pariter ratione videtur,
Errare, atque ILLI, supera quos diximus ante.
Adde quod imbecilla nimis Primordia fingit,
Si Primordia sunt, simili quæ prædita constant
Natura, atque ipsæ res sunt; æquèque laborant,
Et pereunt, neque ab exitio res ulla refrænat:
Nam quid in oppressu valido durabit eorum,

Ut

Now, let us inquire into the [x] *Homœomery* of [y] *Anaxagoras*, the *Greeks* ſo call it, but the Poverty of the Latin Tongue will not allow us to expreſs it; but yet, by a ſhort Periphraſis, we can explain that Thing which he calls *Homœomery*, and makes the Principle of Bodies. For inſtance, Bones proceed from ſmall and little Bones, and Fleſh is made of ſmall and little Bits of Fleſh; and Blood is form'd of many Drops of Blood flowing together; and Gold, he thinks, conſiſts of little Grains of Gold; and Earth grows firm by Particles of Earth; Fire is made of Fire; Water from Water ſprings; and all Things elſe, he thinks, from Cauſes ſuch as Theſe ariſe. *Againſt Anaxagoras.*

And yet this Man in no Caſe will allow in Things a *Void*, nor that there is an End to Bodies being divided: He equally miſtakes in both; and ſo do thoſe Sages ſpoken of before.

Beſides [z], the Seeds he choſe are much too weak, if of the ſame frail Nature they conſiſt, as do the Things themſelves, they equally fall to decay, and periſh, nothing hinders them from Death: For which of theſe can long hold out againſt the fierce Jaws of Death, and ſo eſcape

[x] *Homœomery* ſignifies a Likeneſs of Parts; we call *Homœomeries* thoſe Things whoſe minuteſt Parts have the Name of the Whole, as Stones, Gold, Blood, &c.

[y] This Philoſopher held the Matter of which all Things are produced to be infinite, and made it conſiſt of very minute Particles, exactly like one another, confuſed at firſt, but reduced afterwards into Order by the Divine Mind. Things he aſſerted were formed of ſimilar Parts, as Bones of little Bones, Blood of Drops of Blood, &c.

[z] If like Things conſiſt of like, and the Principles are exactly of the ſame Nature with the Compounds, it follows that they are both equally liable to periſh; for certainly no Reaſon can be given, why a ſmall Part of Fleſh ſhould not be equally obnoxious to Corruption as a greater.

Ut mortem effugiat lethi ſub dentibus ipſis?
Ignis? an Humor? an Aura? quid horum? Sanguen? an Oſſa?
Nil, ut opinor, ubi ex æquo res funditus omnis
Tam mortalis erit, quàm quæ manifeſta videmus
Ex oculis noſtris aliqua vi victa perire.
At neque recidere ad Nihilum res poſſe, neque autem
Creſcere de Nihilo, teſtor res ante probatas.
Præterea quoniam Cibus auget corpus alitque:
Scire licet, nobis Venas, & Sanguen, & Oſſa,
Et Nervos alienigenis ex partibus eſſe:
Sive Cibos omneis commiſto corpore dicent
Eſſe, & habere in ſe Nervorum corpora parva,
Oſſaque, & omnino Venas, parteiſque Cruoris;
Fiet, uti Cibus omnis & aridus, & Liquor ipſe,
Ex alienigenis rebus conſtare putetur,
Oſſibus, & Nervis, Veniſque, & Sanguine miſto.
Præterea quæcunque è Terra corpora creſcunt;
Si ſunt in Terris, Terras conſtare neceſſe 'ſt
Ex alienigenis, quæ Terris exoriuntur.
Transfer item, totidem verbis utare licebit:
In Lignis ſi flamma latet, fumuſque, ciniſque:
Ex alienigenis conſiſtant Ligna neceſſe 'ſt.
Linquitur hic tenuis latitandi copia quædam:
Id quod ANAXAGORAS *ſibi ſumit, ut omnibus omneis*
Res putet immiſtas rebus latitare: ſed illud
Apparere unum, cujus ſint pluria miſta,

Et

Deſtruction, cruſhed between his very Teeth? Can Fire? Can Air? Can Water? Which of theſe? Can Blood? Can Bones? In my Opinion none. All Things in Nature then would equally be liable to Death, as are ſuch Things we ſee before our Eyes by any Force deſtroy'd. But this, I think, is fully proved before, that Nothing can fall to Nothing, or from Nothing riſe.

Besides, [a] ſince Food increaſes and ſupports the Body, then we know the Veins, the Blood, the Bones, conſiſt of heterogeneous and Parts diſſimilar, as does our Food. But if they ſay all Food conſiſts of Parts various and mixed, and in itſelf contains the little Strings of Nerves and Bones, and all the Veins and Parts of Blood, then all dry Meat and Drink muſt needs conſiſt of Parts diſſimilar, of Bones, of Nerves, of Veins, and mingled Blood.

Further, if all Things which grow from the Earth are in the Earth contain'd, the Earth muſt then conſiſt of Parts diſſimilar, as do thoſe Things which from the Earth ariſe. Now change the Theme, but keep the Terms the ſame; in Wood if Flame and Smoke, and Aſhes lay conceal'd, then Wood muſt needs conſiſt of Parts of different Frame.

But here a thin Evaſion ſeems to ſhake this Argument a little; and *Anaxagoras* himſelf makes uſe of it: he thinks all Things are mixed with all Things and lie hid, but that one Thing only

[a] The Body is ſupported by ſeveral Sorts of Food, which plainly conſiſts of diſſimilar Parts; and therefore the Parts of our Body conſiſt of diſſimilar likewiſe: for the ſeveral Parts of it, the Bones, the Veins, the Nerves, are nouriſhed with different and diſſimilar Aliments. If it be pretended, that thoſe Aliments contain ſome Particles of Bones, Nerves, &c. it follows that there is not in thoſe Bodies that *Homœomery* imagined by *Anaxagoras*.

Et magis in promptu, primaque in fronte locata:
Quod tamen à vera longe ratione repulsum 'st.
Conveniebat enim Fruges quoque sæpe minutas,
Robore cum saxi franguntur, mittere signum
Sanguinis, aut aliûm nostro quæ corpore aluntur:
Cum lapidi lapidem terimus, manare cruorem,
Consimili ratione Herbas quoque sæpe decebat,
Et laticis dulceis guttas, similique sapore
Mittere, lanigeræ quali sunt ubera lactis:
Scilicet & Glebis terrarum sæpe friatis
Herbarum genera, & fruges, frondeisque videri,
Dispertita, atque in Terris latitare minutè:
Postremo, in Lignis cinerem fumumque videri,
Cum præfracta forent, igneisque latere minutos.
Quorum nil fieri quoniam manifesta docet res,
Scire licet non esse in rebus res ita mistas:
Verum semina multimodis immista latere
Multarum rerum in rebus communia debent.
At sæpe in magnis sit montibus, inquis, ut altis
Arboribus vicina cacumina summa terantur
Inter se, validis facere id cogentibus Austris,
Donec fulserunt flammæ fulgore coörto:
Scilicet: & non est lignis tamen insitus Ignis,
Verùm Semina sunt Ardoris multa, terendo
Quæ cum confluxere, creant incendia sylvis.
Quòd si tanta foret sylvis abscondita flamma,
Non possent ullum tempus celarier Ignes:
Conficerent volgò sylvas, Arbusta cremarent.

Jamn

appears, of which it moſt abounds, and on the Surface lies; but this Reply is vain, and wide from Truth; for then the little Grains of Corn, when ground, would ſhew ſome Signs of Blood, or of ſome other Parts which form our Bodies; and when we wear the Stones, the Blood would flow. By the like Reaſon Herbs would ſweat ſweet Drops of Liquor, ſo delightful to the Taſte, as flow from Dugs of woolly Sheep, and Clods of crumbled Earth would ſhew the various Kinds of Fruits and Herbs, and Leaves diſtinct and hid in ſmalleſt Particles within the Earth; And then, in Wood divided, might be ſeen conceal'd Aſhes and Smoke, and ſmalleſt Parts of Fire. But ſince Experience ſhews Nothing of this appears, we muſt conclude there' sno ſuch Mixture as This in Things; but ſay, that common Seeds of many Things in various Order join'd, are mix'd in every Thing, and lie conceal'd.

But oft, [b] you ſay, upon the Mountain Tops, the Heads of lofty Trees that grow together are by the violent Blaſts of forcing Winds, ſo rubb'd by cloſe Colliſion, that they ſoon are all on fire, and Flames ſhine out. 'Tis true, and yet there's no actual Fire within the Wood, but many Seeds of Fire, which by hard Rubbing unite, and ſo the Wood is all in flames. For if ſo much of Fire had lain concealed within the Wood, this Fire would have appeared immediately, and ſo conſumed the Wood intirely, and burnt its Root Branches to the ground.

[b] He ſays, there is not any Fire in the Tree itſelf, but that the Seeds of Fire, or the *Moleculæ* of the Atoms, being diſpoſed in a certain and new Order, and daſhing with Violence againſt one another, exhibit and produce the Species of Fire. If there were actually Fire in Woods and Foreſts of Trees, it would certainly ſhew its Strength, and make a wide Deſtruction.

You

Jamne vides igitur, paullo quod diximus ante,
Permagni referre eadem Primordia ſæpe
Cum quibus, & quali poſitura contineantur,
Et quos inter ſe dent motus, accipiantque;
Atque eadem paullo inter ſe mutata creare
Igneis è Lignis, quo pacto Verba quoque ipſa
Inter ſe paullo mutatis ſunt elementis,
Cum LIGNA, *atque* IGNES *diſtincta voce notemus.*
Denique jam quæcunque in rebus cernis apertis,
Si fieri non poſſe putas, quin Materiaï
Corpora conſimili natura prædita fingas,
Hac ratione tibi pereunt Primordia rerum:
Fiet uti riſu tremulo concuſſa cachinnent,
Et lacrymis ſalſis humectent ora, genaſque
Nunc age, quod ſupereſt, cognoſce, & clarius audi.
Nec me animi fallit quam ſint obſcura, ſed acri
Percuſſit thyrſo Laudis ſpes magna Meum cor,
Et ſimul incuſſit ſuavem mî in pectus amorem
Muſarum: quo nunc inſtinctus, mente vigenti
Avia Pieridum peragro loca, nullius ante
Trita ſolo: juvat integros accedere fonteis,
Atque haurire: juvatque novos decerpere flores:
Inſignemque meo capiti petere inde coronam,
Unde prius nulli velârint tempora Muſæ:
Primùm quod magnis doceo de rebus, & arctis
RELLIGIONUM *animos nodis exſolvere pergo:*
Deinde quod obſcura de re tam lucida pango
Carmina, Muſæo contingens cuncta lepore,

Id

You ſee therefore of what Concern it is, as we obſerv'd before, with what firſt Principles thoſe Seeds are joined, and in what Order placed, and what the Motions are they give and take among themſelves, and how, the Seeds remaining ever the ſame, but yet their Order changed, produce a Fire from Wood; juſt as we write *Ignis* and *Lignum*, tho' quite different Words, they are yet compoſed of Letters much the ſame.

Lastly, if Things moſt obvious to the Senſe, you think, cannot be form'd, unleſs you make their Seeds conſiſt of Principles the ſame in Nature, thoſe Principles would be deſtroy'd; you'd ſee ſome Seeds would [c] ſhake their little Sides with Laughing, ſome bedew their Face with Tears.

Now, what remains obſerve, attend me cloſe; I know my Theme is dark, but the great Love of Praiſe pricks on my Heart with ſharpeſt Spurs, and ſtrikes my Soul at once with ſweet Deſire of the moſt tuneful Nine; by this urged on, my Mind in Rapture, I haunt the Muſes Seats, of difficult Acceſs, and yet untrod; I love to approach the pureſt Springs, and thence to draw large Draughts. I love to crop freſh Flowers, and make a noble Garland for my Head; from thence, where yet the Muſes never bound another's Temples with a Crown like mine. And firſt, I write of lofty Things, and ſtrive to free the Mind from the ſevereſt Bonds of what Men call *Religion*; then my Verſe I frame ſo clear, altho' my Theme be dark; ſeaſoning my Lines with the Poetic Sweets of Fancy, and Reaſon

[c] Some late Philoſophers ſeem at leaſt to favour this opinion of *Anaxagoras*, when they aſſert, that theſe Affections do indeed, in ſome ſort, præexiſt in the Elements, tho' not in the ſame manner as in Man.

juſtifies

Id quoque enim non ab ulla ratione videtur:
Sed veluti Pueris abſinthia tetra medentes
Cum dare conantur, prius oras pocula circum
Contingunt mellis dulci flavoque liquore,
Ut Puerorum ætas improvida ludificetur
Labrorum tenus, interea perpotet amarum
Abſinthî laticem, deceptaque non capiatur,
Sed potiùs tali facto recreata valeſcat:
Sic ego nunc, quoniam hæc Ratio plerumque videtur
Triſtior eſſe, quibus non eſt tractata, retroque
Volgus abhorret ab hac, volui tibi ſuaviloquenti
Carmine Pierio Rationem exponere noſtram,
Et quaſi Muſæo dulci contingere melle,
Si tibi fortè animum tali ratione tenere
Verſibus in noſtris poſſem, dum perſpicis omnem
Naturam rerum, qua conſtet compta figura.
Sed quoniam docui, Solidiſſima Materiaï
Corpora perpetuò volitare invicta per ævum
Nunc age Summaï ecquænam ſit finis eorum,
Necne ſit, evolvamus: item, quod Inane repertum 'ſt
Seu locus, ac ſpatium, res in quo quæque genantur,
Pervideamus utrum finitum funditus OMNE
Conſtet, an Immenſum pateat vel ad uſque profundum?
OMNE *quod eſt, igitur, nulla regione viarum*
Finitum 'ſt: namque Extremum debebat habere.
Extremum porro nullius poſſe videtur
Eſſe, niſi ultra ſit quod finiat, ut videatur,
Quò non longiùs hæc ſenſus natura ſequatur.

Nunc

juſtifies the Method. For as the Phyſicians, when they would prevail on Children to take down a bitter Draught of Wormwood, firſt tinge the Edges of the Cup, that ſo the Childrens unſuſpecting Age may be deceiv'd, at leaſt their Lips, and take the bitter Juice, thus harmleſly betrayed, but not abuſed, they have their Health reſtored: So I, becauſe this Syſtem ſeems ſevere and harſh, to ſuch who have not yet diſcern'd its Truth, and the common Herd are utterly averſe to this Philoſophy, I thought it fit to ſhew theſe rigid Principles in Verſe ſmooth and alluring, and tinge them, as it were, with ſweet Poetic Honey, thus to charm thy Mind with my ſoft Numbers, till you view the Nature of All Things clearly, and perceive the Figure and the Order they diſplay.

But ſince I taught the Principles of Matter are ſolid, are eternal, ever-moving, nor are deſtroy'd; now, come, let us enquire, whether they have an End, or are by Nature infinite: and ſince we have found a *Void* or Place, or Space in which all Things are mov'd, let us now ſee whether the Univerſe, made up of Void and Body, be circumſcrib'd, or does to a profound Immenſity extend.

This [d] *All*, therefore, does not admit of Bounds; for if it did, then it muſt have ſomething Extreme: Now, no Extreme can be, unleſs it lies beyond thoſe Things whoſe Bounds, or whoſe Extreme it is, from whence they may be ſeen, and beyond which our Faculty of Sight can reach no further. Now ſince we muſt own,

[d] Whatever is finite has an Extreme, but whatever has an Extreme may be ſeen by what is without or beyond it. Now the Univerſe, or the All, is not ſeen by any Thing that is beyond it; therefore the Univerſe has no Extreme.

that

Nunc extra Summam quoniam nihil esse fatendum 'st,
Non habet Extremum: caret ergo fine, modoque:
Nec refert quibus assistas regionibus ejus,
Usque adeo quem quisque locum possidit, in omneis
Tantundem parteis infinitum Omne relinquit.
Præterea, si jam finitum constituatur
Omne quod est spatium, si quis procurrat ad oras
Ultimas extremas, jaciatque volatile telum,
Id validis utrùm contortum viribus ire
Quò fuerit missum mavis, longéque volare,
An prohibere aliquid censes, obstareque posse?
Alterutrum fatearis enim, summaque necesse 'st,
Quorum utrumque tibi effugium præcludit, & Omne
Cogit ut exempta concedas fine patere.
Nam sive est aliquid, quod prohibeat, officiatque
Quò minu' quo missum 'st veniat, finique locet se,
Sive foras fertur, non est ea fini' profecto.
Hoc pacto sequar, atque oras ubicunque locaris
Extremas, quæram quid Telo denique fiat.
Fiet uti nusquam possit consistere finis:
Effugiumque fugæ prolatet copia semper.
Præterea spatium Summai totius omne
Undique si inclusum certis consisteret oris,

Finitumque

that nought can be beyond the *All*, this *All* has therefore no Extreme, it has no End, no Bounds; nor does it signify what Spot of this great All you stand upon; for on what Part soever you are fix'd, you have a wide and infinite Space around you every way.

But if this wide Extent of Space be finite and circumscrib'd, let a Man stand upon the utmost Verge, and from thence throw a[e] Dart, whether you choose this Dart, with mighty Force thus cast, should reach the Mark design'd, and fly swift on, or whether you think that something should hinder or oppose its Flight, and one of these you must confess; now either way you are caught, and can't escape: You are forc'd to own this All lies wide extended without Bounds. For whether there be something that does hinder and stop its Flight, so that it cannot reach the Mark design'd, and there rest still and fix'd; or whether it flies forward, there this End you cannot fix: for if it stops, then something must lie beyond the utmost Verge; and if it flies, there is a Space beyond the extremest Brink. And thus I follow close, and whereso'er you place the extremest Bounds, I still demand what comes of your Dart? So that no Bounds can any where be fixed, but Space immense will always give a Passage to its Flight.

Besides, were this *All's* extended Space shut up by certain Bounds on every Side, and was by

[e] Suppose the Universe be finite, and let a Man be placed on the extremest Verge of it, and strive to throw a Dart, either the Dart will fly forward, or something will stop it; if it flies forward, there is a Space beyond the extremest Brink; if it be stopt by any Thing, there must be Something without the utmost Part.

Finitumque foret, jam copia Materiaï
Undique ponderibus solidis conflúxet ad Imum;
Nec res ulla geni sub cœli tegmine posset:
Nec foret omnino Cœlum, neque lumina Solis:
Quippe ubi materies omnis cumulata jaceret
Ex infinito jam tempore subsidendo
At nunc nimirum requies data Principiorum
Corporibus nulla 'st: quia nil est funditus Imum,
Quò quasi confluere, & sedes ubi ponere possint;
Semper & assiduo motu res quæque genuntur
Partibus in cunctis, æternaque suppeditantur
Ex Infinito cita corpora Materiaï.
Postremò ante oculos rem res finire videtur,
Aër dissepit Colleis, atque Aëra Montes;
Terra Mare, & contra Mare Terras terminat omneis.
OMNE *quidem verò nihil est quod finiat extra:*
Est igitur natura loci, spatiumque profundi,
Quod neque clara suo percurrere flumina cursu
Perpetuo possint ævi labentia tractu:
Nec prorsum facere, ut restet minus ire, meando:
Usque adeo passim patet ingens copia rebus,
Finibus exemptis in cunctas undique parteis.

Ipsa

Nature finite, then this [f] Mass of Matter, press'd by its solid Weight, had long ere now sunk to the *lowest Place*, and therefore Nothing under the Vault of Heaven could have a Being, nor could there be Heavens at all, or the Sun's Light. For then the Seeds of Things that had been sinking from all Eternity, would in Confusion lie on Heaps; but now the Principles of Bodies having no Rest at all, are ever moving, because there's no such Thing as *lowest Place*, to which they may descend, no fix'd Abode where they should rest; but Things are ever carried by Motion never-ending, through every Part of this vast All, from whence the active Seeds of Things arise, and are eternally supplied.

Further [g], we see one Thing bounds in another; the Air bounds in the Hills, the Hills the Air, the Earth shuts up the Sea, and then again the Sea surrounds the Earth; but this Great *All* Nothing exterior to it self can bind. For the Nature of this Place, this empty Space, is such, that Rivers of the swiftest Stream, were they to run for Ages infinite, with a perpetual Current, could not run through it, or ever by their running prove they had less of their Course to run; so vastly wide this mighty Space of Things extended lies on all Sides, every way, without all Bounds.

[f] If the Universe were finite, in that finite Space there would be some lowest Place, to which Matter that by its natural Gravity had been sinking from all Eternity, would have sunk down and rested. And thus it would have happened long ago, that the universal Matter having reached the *lowest Place*, would from that Time have generated Nothing; for Nothing can proceed from Seeds that are at Rest.

[g] There can be Nothing exterior to the Universe that can be its Bound, since that very Thing that is exterior to it is a Part of it; for the Universe contains *All* that is.

Ipsa modum porro sibi rerum Summa parare
Ne possit, Natura tenet: quia Corpus Inani,
Et quod Inane autem 'st, finiri Corpore cogit:
Ut sic alternis Infinita omnia reddat.
Aut etiam, alterutrum nisi terminet alterum eorum,
Simplice natura & pateat tantum Immoderatum:
Nec Mare, nec Tellus, nec Cœli lucida templa,
Nec Mortale genus, nec Divûm corpora sancta
Exiguum possent horaï sistere tempus.
Nam dispulsa suo de cœtu Materiaï
Copia ferretur magnum per Inane soluta.
Sive adeo potiùs nunquam concreta creâsset
Ullam rem, quoniam cogi disjecta nequisset.
Nam certè neque consilio primordia rerum
Ordine se quæque, atque sagaci mente locârunt;

Nec

BESIDES [h], the Laws of Nature do provide, that this Universe of Things will not admit of Limits to itself, because Body is Bound to *Void*, and *Void* a Bound to Body; and by this mutual Termination it is, that this great All becomes Immense; for were not each a Bound unto the other, were Body not a Limit set to *Void*, the Void would be infinite, and all finite Bodies would be dissolv'd, and so nor Sea, nor Earth, nor the bright Heavens, nor mortal Race of Men, nor sacred Bodies of the Gods could be one Moment of an Hour; for the Seeds of Bodies being disunited in themselves, would fly, and quite dissolv'd, be carried through the *Void*; or rather, being never joined, had form'd no Being; for once scatter'd through this Space, they could not be compelled to join again.

FOR certainly [i] the Principles of Things could never range themselves in Form or Order, by Counsel, or by Wisdom of the Mind, nor any

[h] This Argument is allowed to be very intricate, and hard to be explained; he seems to mean that Body and Void mutually bind each other, and that an Immensity must needs proceed from the mutual Termination; because neither of them, that is, neither Body nor Void, can be the last, but whatever has no Part that can be the Least or extremest, that indeed is infinite.

[i] The *Stoicks* held the World to be a rational Creature, and to consist of Heaven and Earth, as of Soul and Body. The Heavens, they said, were the same to the whole, as Reason is to Man, and the Stars were the Eyes of the World. He derides this Opinion, and teaches, that after a Length of Time all Things were produced by a fortuitous Concourse of these indivisible Bodies, which after striking, jostling and crouding one another in the infinite Void, perhaps for many Myriads of Ages, after all possible Configurations, Changes, Postures, Successions and Agitations, happened at last to fall into this goodly Fabrick of the Universe. This is the System of *Epicurus* concerning the first Beginning of Things, which common Sense sufficiently overthrows.

Nec quos quæque darent motus pepigere profecto:
Sed quia multimodis, multis, mutata, per Omne
Ex infinito vexantur percita plagis,
Omne genus motus, & cætus experiundo,
Tandem deveniunt in taleis disposituras,
Qualibus hæc rebus consistit Summa creata:
Et multos etiam magnos servata per annos,
Ut semel in motus conjecta 'st convenienteis,
Efficit, ut largis avidum Mare fluminis undis
Integrent Amnes, & Solis Terra vapore
Fota novet fœtus, summissaque gens animantum
Floreat, & vivant labentes Ætheris ignes.
Quod nullo facerent pacto, nisi Materiaï
Ex Infinito suboriri copia posset,
Unde amissa solent reparari in tempore quoque.
Nam veluti privata cibo Natura animantum
Diffluit amittens corpus, sic omnia debent
Dissolvi, simul ac defecit suppeditare
Materies recta regione aversa viaï.
Nec Plagæ possent extrinsecùs undique Summam
Conservare omnem, quæcunque 'st conciliata.
Cudere enim crebrò possunt, partemque morari,
Dum veniant aliæ, ac suppleri Summa queatur.

Compact make how each ſhould move; but being chang'd in various Forms, and ſtruck with many Blows, they are driven through this *Void* for many Ages, and having try'd all Kinds of Motion, and of Union, they at lengh by chance are ſo diſpoſed, to frame thoſe Bodies of which this Univerſe of Things conſiſts. And [k] theſe Seeds once thrown into convenient Motions, and keeping in the ſame for many Ages, is the true Cauſe that Rivers, with a large Supply of Waters from their Streams, fill up the greedy Sea, and the Earth, ſupported by the Sun's Heat, renews the Fruits, and the Race of living Creatures flouriſh, and the rolling Stars of Heaven are kept alive; all which could never be, if from this infinite Maſs a Supply of Seeds flow'd not, from whence decaying Things might riſe, and live, and be from Age to Age repaired.

For as the Animal Creation, deprived of Food, muſt periſh, and their Bodies be quite deſtroy'd, ſo Things muſt be diſſolv'd as ſoon as Matter, turning from its Courſe, fails to afford Supply, and ſave the whole.

Nor, as ſome may object, can [l] outward Blows on all Sides given, preſerve this All of Things we ſee compounded, from falling into pieces: They may indeed beat thick, and ſtay ſome Part, till other Atoms come, and ſo ſupply the Univerſe.

[k] After this accidental Coition of the Seeds, they never varied from their original and ſtated Motions; and ſo the Frame of the Univerſe is preſerved.

[l] He means that finite Atoms cannot always, and at every Moment of Time, mutually ſtrike one another; and when they do, they muſt ſometimes rebound, and thus give Time and Room for the Principles of the Compounds which affect to be in continual Motion, to break the Chain of their Contexture, and to fly away from one another.

Interdum reſilire tamen coguntur, & unà
Principiis rerum ſpatium, tempuſque fugaï
Largiri, ut poſſint à cætu libera ferri.
Quare etiam atque etiam ſuboriri multa neceſſe 'ſt.
Et tamen ut Plagæ quoque poſſint ſuppetere ipſæ,
Infinita opus eſt vis undique Materiaï.
Illud in his rebus longe fuge credere, Memmi,
In medium Summæ (quod dicunt) omnia niti,
Atque ideo Mundi naturam ſtare ſine ullis
Ictibus externis, neque quòquam poſſe reſolvi
Summa atque Ima, quod in Medium ſint omnia nixa,
(Ipſum ſi quicquam poſſe in ſe ſiſtere credis:
Et quæ pondera ſunt ſub Terris omnia ſurſum
Nitier, in Terraque retrò requieſcere pôſta:
Ut per aquas quæ nunc rerum ſimulacra videmus:)
Et ſimili ratione Animalia ſubtu' vagari
Contendunt, neque poſſe è Terris in loca Cæli
Recidere inferiora magis, quam corpora noſtra
Sponte ſua poſſint in Cæli templa volare:
Illî cum videant Solem, nos Sidera noctis
Cernere, & alternis nobiſcum tempora Cæli
Dividere, & noctes parileis agitare, dieſque.

Sed

But oft they are compelled to bound, and leap back, and ſo afford the Seeds both Time and Place to fly away, and thus to get their former Liberty again. Therefore, 'tis fit that many Seeds ſhould ſtill ariſe, from Time to Time, for a Supply; and that theſe Blows might never ceaſe to beat, the Force of Matter muſt be on all Sides infinite.

In theſe Enquiries ſee that you avoid, my *Memmius*[m], to believe with ſome that ſay, all Bodies ſtrive to reach the middle Place of this great *All*, and ſo the Nature of the World ſtands fix'd, not ſtruck at all by outward Blows; nor can the upper or the lower Parts be ſcatter'd any way abroad, ſince all Things by Nature to the Centre tend (as if you could believe that any Thing could ſtay and reſt upon itſelf, that heavy Bodies tend upwards, and fix their Reſt upon the Surface of the Earth oppoſite to us, juſt as we ſee the Images of Bodies ſhew themſelves in Water.) By the ſame Reaſon they contend, that Creatures walk underneath, as we above; nor can they fall into the Regions of the Air below, than can our Bodies naturally fly upwards towards Heaven; and when they ſee the Sun, we view the Stars of Night, and ſo by turns they ſhare with us the Seaſons of the Heavens, and with us ſtill divide the Nights and Days.

[m] He refutes the Opinion, that the Univerſe has a Centre, to which all Things tend by their natural Gravity. He ſays, there can be no Middle, becauſe the Void is infinite; but what is infinite has neither Beginning nor End, and therefore no Middle. And grant there was a Centre, yet no Reaſon can be given why heavy Bodies ſhould ſtop in the middle Part of the Void, when a Void gives way to heavy Bodies equally in every Part of it.

Sed vanus Stolidis hæc omnia finxerit error,
Amplexi quod habent perversè prima viaï.
Nam Medium nihil esse potest, ubi Inane, locusque
Infinita: neque omnino, si jam Medium sit,
Possit ibi quicquam hac potiùs consistere causa,
Quàm quavis alia longè regione manere.
Omnis enim locus, ac spatium, quod Inane vocamus,
Per Medium, per non Medium concedat oportet
Æquis ponderibus, motus quàcunque feruntur.
Nec quisquam locus est, quo Corpora cum venere,
Ponderis amissa vi possint stare in Inani:
Nec quod Inane autem 'st, illis subsistere debet,
Quin, sua quod natura petit, concedere pergat.
Haud igitur possunt tali ratione teneri
Res in concilio, Medii cuppedine victæ:
Præterea quoque jam non omnia corpora fingunt
In Medium niti, sed Terrarum, atque Liquorum,
Humorem ponti, magnisque è montibus Undas,
Et quasi Terreno quæ corpore contineantur:
At contrà tenues exponunt Aëris auras,
Et calidos simul à Medio differrier Igneis,

But vain Miſtake hath form'd this Scheme for Fools, who judge perverſly of the Seeds of Things. For there can be no *Middle*, where there is a *Void* or Space that's infinite; or if there was, can Bodies, for this Reaſon, rather ſtop their Courſe in this Medium, than take up their Abode in any Part of Space that's further off. For Place, or empty Space, which we call *Void*, muſt equally give way to heavy Movements through a Medium, or through none, which way ſoe'er their Motions tend; nor is there any Place where Bodies, when they come, throw off their Weight, and ſtand fix'd in a Void, and take their Reſt. Nor can a Void ſupport the Weight of Bodies, but muſt by its own Nature ſtill give way. It follows then, that Things are not preſerv'd, or held together by this means, as if they fondly ſtrove to reach a middle Space.

Besides, all Bodies, they pretend, do not incline towards the Centre, but thoſe of Earth and Water, the Sea, and Rivers rolling from the Hills, and thoſe that are compoſed of [n] earthy Parts. But the thin Air, they ſay, and the hot Fire are carried upwards from the Middle; and hence it is the Sky is ſpangled every way with Stars, and

[n] Thoſe who ſuppoſe a Centre, aſſert, that the Particles of the Earth and Water only tend thither; but he anſwers, if ſome earthly Particles did not riſe upwards likewiſe, how could Animals be nouriſh'd? How could Trees and all manner of Plants grow? He ſays, they pretend that certain ſolid Heavens incloſe thoſe light Particles that riſe from the Centre, are roll'd round all Things, and hold them in; for if theſe Particles were not ſtopt, they would immediately fly through the immenſe Void, and the Heavens and the Earth would be diſſolved, and fall to pieces; for where any Part of the World begins to fail, the Whole will ſoon be diſſolved. He recites theſe Opinions as Abſurdities, and thinks by ſo doing he confutes them.

Atque ideo totum circumtremere Æthera signis,
Et Solis flammam per cœli cærula pasci,
Quod calor à Medio fugiens ibi colligat igneis.
(Quippe etiam vesci è Terra mortalia fœtla:
Nec prorsum arboribus summos frundescere ramos
Posse, nisi à terris paullatim cuique cibatum
Terra det) at suprà circum tegere omnia Cœlum
Ne volucrum ritu flammarum, mœnia Mundi
Diffugiant subito magnum per Inane soluta,
Et ne cætera consimili ratione sequantur:
Neve ruant cœli tonitralia templa supernè,
Terraque se pedibus raptim subducat, & omnes
Inter permistas terræ, cœlique ruinas
Corpora solventes, abeant per Inane profundum,
Temporis ut puncto nihil exstet relliquiarum,
Desertum præter Spatium, & Primordia cæca.
Nam quacunque priùs de parti corpora cêsse
Constitues, hæc rebus erit parsjanua lethi:
Hac se turba foras dabit omnis Materiaï.
Hæc si pernosces, parva perfunctus opella,
(Namque alid ex alio clarescet) non tibi cæca
Nox iter eripiet, quin ultima Naturaï
Pervideas, ita Res accendent lumina Rebus.

the Sun's Flame in his celeſtial Courſe is fed, becauſe the Fire flying from the Centre, there binds up all its Heat; (ſo from the Earth all mortal Things are fed, nor can the Trees adorn their lofty Heads with Leaves, unleſs the Earth to every Kind affords its due Support.) They ſay, a ſort of Heavenly Canopy above covers the whole, and holds it in; leſt the ° World's Walls, their Parts being all diſſolv'd, ſhould inſtantly be ſcatter'd through the *Void*, like ſwifteſt Flames, and all Things be o'erwhelm'd in this great Ruin; leſt the thundering Vaults of Heaven ſhould tumble from above, and Earth ſhould fail our trembling Feet, and the whole Race of Men, their Bodies broken and diſſolv'd, ſhould wander through the boundleſs *Void*, amidſt theſe mingled Ruins of the Earth and Heavens; and in a Moment nothing would be left but deſart empty Space, and ſenſeleſs Seeds. For in whatever Part you will ſuppoſe the Seeds to ſeparate, here will be the Gate of Death to Bodies; for Matter through the Breach will ruſh abroad, and preſs with mighty Force.

If This you throughly know, and little Pains will ſerve (for one Thing by another you'll explain) no more ſhall Darkneſs interrupt your Way, but you ſhall view the utmoſt Depths of Nature; for Things will ſhew themſelves by mutual Light.

° He means the whole Circumference of the Heavens, which, like Walls, incloſe and ſurround the World.

The END *of the* FIRST BOOK.

THE ARGUMENT OF THE SECOND BOOK.

OUR Poet made choice of a Subject naturally crabbed, and therefore he adorned it with Poetical Deſcriptions and Precepts of Morality in the Beginning and Ending of his Books. In this Book he treats of the Motions and Figures of his Atoms, and introduces his Subject with the Praiſe of that Philoſophy which Epicurus *taught, and which he calls,* The Doctrine of the Wiſe. *This he recommends to his* Memmius, *as what will alleviate all his Care, and deliver the Mind from Anxiety and Fear. Then he diſputes about the Properties and Qualities of his Seeds or Atoms, the firſt of which is Motion. That Seeds do move, is demonſtrated from the Generation of Things, but their Motion is downwards; for all Seeds are heavy: But when ſolid Seeds meet, they muſt of neceſſity rebound every way from one another. Thus ſome Seeds happen to unite and join together, and thoſe whoſe Union is moſt compact, compoſe Things that are hard and denſe; but the Seeds whoſe Connexion is more looſe, make thoſe that are ſoft and rare. But ſome Seeds never unite, but like the Particles of Duſt we ſee in the Beams of the Sun, are with perpetual Motion carried through the Void, and inceſſantly ſtrike, and drive up and down*

other

other Atoms and Themſelves. He then explains the Swiftneſs of the Seeds that tend downwards; and, after his uſual Manner, ſeverely falls upon thoſe who confeſs a divine and ruling Providence. He obſerves that the Seeds, as they tend downwards, decline a little from a ſtrait Line; for unleſs they did ſo, Nothing at all, at leaſt no free Agent, could ever be produced. He ſhews that the Seeds ſtill keep the ſame Motion in which they have moved from all Eternity; and that no Man ſhould diſtruſt this Opinion, becauſe he cannot diſcover this Motion by his Sight, ſince the very Seeds themſelves cannot be perceived. Figure is the ſecond Quality or Property of Seeds, and he proves that all Seeds are not of the ſame Figure, but that ſome are round, ſome ſquare, ſome ſmooth, ſome rough, ſome hooked, &c. And he ſhews at large, what Figures compoſe bitter Bodies, what ſweet, what hard, what ſoft; that this Variety of Figures is not infinite, but that Seeds of the ſame Figure are infinite, that is, the Round are infinite, the Square infinite, &c. He obſerves, that Things are not compoſed of Seeds of the ſame Figure, and proves by many Arguments, that compound Bodies contain Seeds of different Figures; Seeds, he ſays, have none of thoſe Qualities which we call ſenſible, as Colour, Taſte, Heat, Cold, &c. and that they are not endowed with Senſe, tho' coloured, ſavory, hot, cold, and ſenſible Things are compoſed of them. Laſtly, that theſe infinite Seeds flying up and down through the infinite Void, compoſe infinite Worlds, and that theſe Worlds are ſometimes increaſed in Bulk by the Seeds that drop down out of the infinite Space, and ſometimes diminiſhed and diſſolved, becauſe the Seeds get looſe and fly away from them into the infinite Space likewiſe; in the ſame Manner as Plants and Animals are born, increaſe in Growth, wax old, and at length die.

T. Lucretii

T. Lucretii Cari

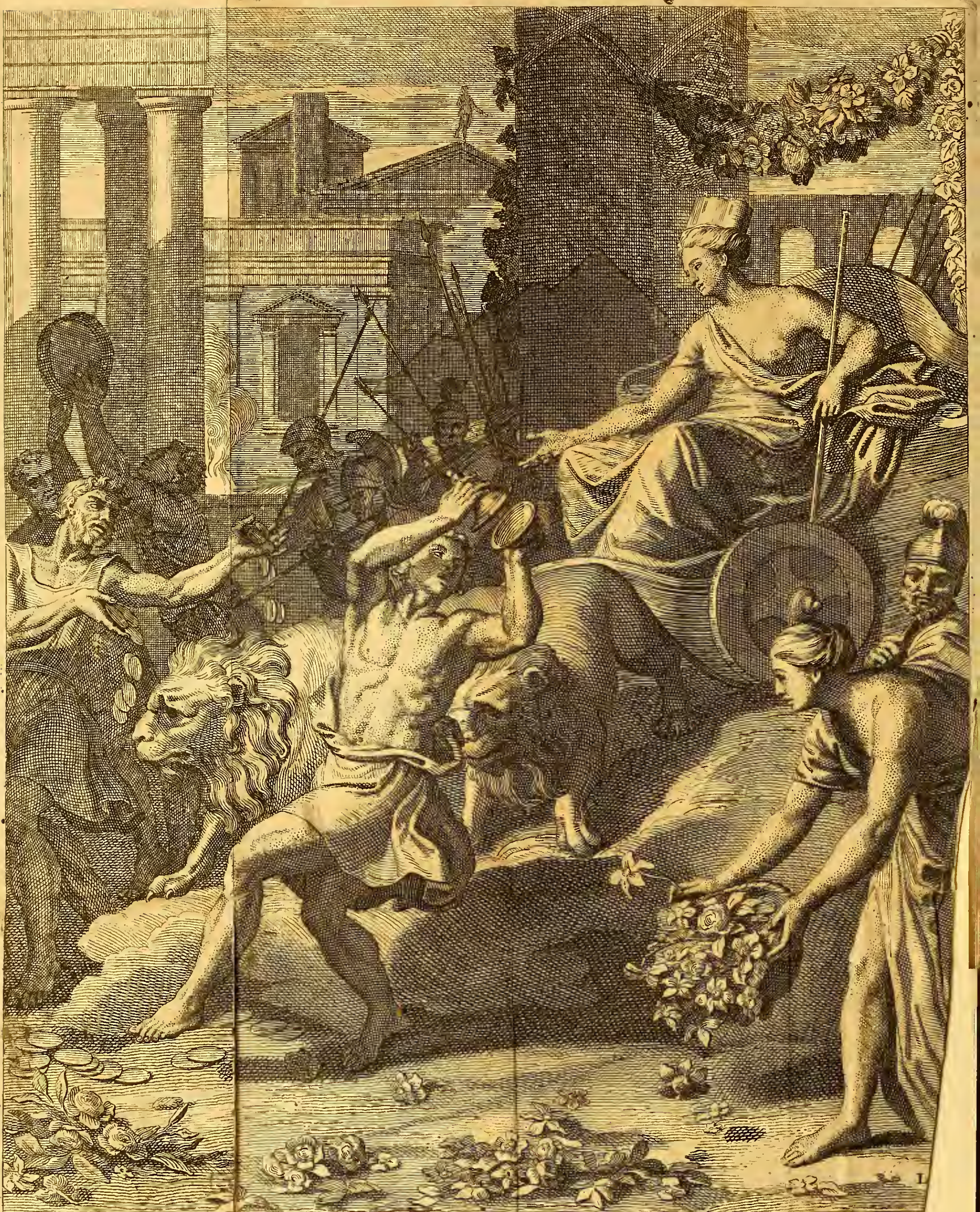
DE

RERUM NATURA

LIBER SECUNDUS.

SUAVE, mari magno turbantibus æquora ventis
E terra magnum alterius ſpectare laborem;
Non quia vexari quemquam 'ſt jucunda voluptas,
Sed, quibus ipſe malis careas, quia cernere ſuave 'ſt.
Suave etiam belli certamina magna tueri
Per campos inſtructa, Tua ſine parte pericli
Sed nil dulcius eſt, benè quàm munita tenere
Edita doctrina Sapientum templa ſerena;

Deſpicere



I. Cheron delin. I. Guernie

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE

SECOND BOOK.

'TIS pleaſant, when a Tempeſt drives the Waves, in the wide Sea, to view the ſad Diſtreſs of others from the Land; not that the Pleaſure is ſo ſweet that others ſuffer, but the Joy is this, to look upon the Ills from which yourſelf are free. It likewiſe gives delight to view the bloody Conflicts of a War, in Battle ranged over all the Plains, without a Share of Danger to yourſelf: But nothing is more ſweet, than to attain the ſerene tho' lofty Heights of true [a] Philoſophy, well fortified with Learning of the *Wiſe*, and thence look down on others,

[a] The Poet introduces his Subject with the Praiſe of that Philoſophy taught by *Epicurus*; and intending in this Book to treat of the Motions and Figures, and other Qualities of his Atoms, he relaxes the wearied Mind of his *Memmius*, by forewarning him of the Dangers and Calamities of others, and to allure him to the Study of that Philoſophy which he calls *The Doctrine of the Wiſe*.

Deſpicere unde queas Alios, paſſimque videre
Errare, atque viam palanteis quærere vitæ,
Certare ingenio, contendere nobilitate,
Noctеis atque dies niti præſtante labore
Ad ſummas emergere opes, rerumque potiri:
O miſeras hominum menteis! ó pectora cæca!
Qualibus in tenebris vitæ, quantiſque periclis
Degitur hoc ævi, quodcunque 'ſt! nonne videre
Nil aliud ſibi Naturam latrare, niſi ut, cùm
Corpore ſejunctus dolor abſit, mente fruatur
Jucundo ſenſu, cura ſemota, metuque!
Ergo corpoream ad naturam pauca videmus
Eſſe opus omninò, quæ demant quemque dolorem,
Delicias quoque uti multas ſubſternere poſſint,
Gratius interdum neque Natura ipſa requirit.
Si non aurea ſunt juvenum ſimulacra per ædeis
Lampadas igniferas manibus retinentia dextris,
Lumina noctурnis epulis ut ſuppeditentur,
Nec domus argento fulget, auroque renidet;
Nec citharis reboant laqueata auraraque templa:
Attamen inter ſe proſtrati in gramine molli
Propter aquæ rivum, ſub ramis arboris altæ,
Non magnis opibus jucundè Corpora curant:
Præſertim cum tempeſtas arridet, & anni
Tempora conſpergunt viridanteis floribus herbas,
Nec calidæ citiùs decedunt corpore febres,
Textilibus ſi in picturis, oſtroque rubenti
Jactaris, quam ſi plebeia in veſte cubandu 'ſt:
Quapropter quoniam nil noſtro in corpore Gazæ

Profi-

and behold Mankind wandering and roving every way, to find a Path to Happineſs; they ſtrive for Wit, contend for Nobility, labour Nights and Days, with anxious Care, for Heaps of Wealth, and to be Miniſters of State.

O wretched are the Thoughts of Men! How blind their Souls! In what dark Roads they grope their way, in what Diſtreſs is this Life ſpent, ſhort as it is! Don't you ſee Nature requires no more, than the Body free from Pain, ſhe may enjoy the Mind eaſy and chearful, remov'd from Care and Fear?

And then we find a little will ſuffice the Nature of our Bodies, and take off every Pain; nay, will afford much Pleaſure, and Nature wiſhes for nothing more deſirable than this. What tho' no [b] Golden Images of Boys, holding forth blazing Torches in their Hands, to light the Midnight Revels of the Great, adorn thy Houſe? What tho' thy Rooms ſhine not with Silver, nor are overlaid with Gold, nor do thy arched gilded Roofs rebound with the ſtrong Notes of Muſick? Yet we find Men ſweetly indulge their Bodies, as they lie together on the ſoft and tender Graſs, hard by a River's Side, under the Boughs of ſome high Tree, without a Heap of Wealth; chiefly when the Spring ſmiles, and the Seaſon of the Year ſprinkles the verdant Herbs with flowery Pride. Nor will a burning Fever ſooner leave the Body, when you are toſſed in Cloaths embroidered on Beds of bluſhing Purple, than when you lie in coarſeſt Blankets. Since Riches then afford no Comfort to our Bo-

The Vanity of all ſublunary Things.

[b] The Golden Statues uſed in the Houſes of Perſons of Quality, inſtead of Sconces and Candleſticks in their Entertainments by Night.

Proficiunt, neque Nobilitas, neque Gloria regni:
Quod supereſt, animo quoque nil prodeſſe putandum:
Si non forte tuas Legiones per loca campi
Fervere cum videas belli ſimulacra cientes:
Fervere cum videas Claſſem, latéque vagari,
His tibi tum rebus timefactæ Relligiones
Effugiunt animo pavidæ, mortiſque timores:
Tum Vacuum pectus linquunt, curaque ſolutum.
Quod ſi ridicula hæc, ludibriaque eſſe videmus,
Re veraque Metus hominum, Curæque ſequaces,
Nec metuunt ſonitus armorum, nec fera tela:
Audacterque inter Reges, rerumque Potentes
Verſantur, neque fulgorem reverentur ab auro,
Nec clarum veſtis ſplendorem purpureaï:
Quid dubitas, quin omne ſit hoc rationis egeſtas,
Omnis cùm in tenebris præſertim vita laboret?
Nam veluti Pueri trepidant, atque omnia cæcis
In Tenebris metuunt: ſic nos in Luce timemus
Interdum nihilo quæ ſunt metuenda magis, quàm
Quæ Pueri in Tenebris pavitant, finguntque futura.
Hunc igitur terrorem animi, tenebraſque neceſſe 'ſt
Non Radii ſolis, neque lucida tela diei
Diſcutiant, ſed Naturæ ſpecies, Ratioque.
Nunc age, quo motu GENITALIA *Materiaï*
CORPORA *res varias gignant, genitaſque reſolvant,*
Et qua vi facere id cogantur, quæve ſit ollis

Reddita

dies, nor Nobleneſs, nor the Glory of Ambition, 'tis plain you are to think they do the Mind no good. If, when you behold your furious Legions embattled o'er the Plains, waging mock War, or when you view your Navy ſtand eager to engage, or bear away o'er the wide Sea, if ſtruck with Sights like theſe, your fearful Superſtitions, and the Dread of Death, forſake your Mind, and leave your Breaſt ſerene, and free from Care, 'twere ſomething. But if theſe Things are vain and all Grimace, and the truth is, that nor the Fears of Men, nor following Cares fly from the Sound of Arms or cruel Darts, but boldly force their way among the Kings and Mighty of the Earth; nor do they Homage pay to ſhining Gold, nor the gay Splendor of a purple Robe. Do you doubt but all this Stuff is want of Senſe, and all our Life is groping in the dark?

For as [c] Boys tremble and fear every thing in the dark Night, ſo we, in open Day, fear Things as vain, and little to be feared, as thoſe that Children quake at in the dark, and fancy making towards them. This Terror of the Mind, this Darkneſs then, not the Sun's Beams, nor the bright Rays of Day can ſcatter, but the Light of Nature and the Rules of Reaſon.

But now, come on, remember you attend, while I explain by what Motion the Genial Seeds of Matter produce the various Kinds of Bodies, and diſſolve them when produced, and by what Force compelled they act, and what Celerity of

[c] As Children dread every thing in the dark, ſo Men are terrified with a Belief of Providence and of Puniſhments after Death, which, according to *Epicurus*, are but the Day-Dreams of a crazy Mind.

Reddita Mobilitas magnum per Inane meandi,
Expediam: Tu te dictis præbere memento.
Nam certè non inter se stipata cohæret
Materies, quoniam minui rem quamque videmus,
Et quasi longinquo fluere omnia cernimus ævo;
Ex oculisque vetustatem subducere nostris:
Cùm tamen incolumis videatur Summa manere,
Propterea quia, quæ decedunt Corpora cuique,
Unde abeunt, minuunt: quo venere, augmine donant:
Illa senescere, at hæc contra florescere cogunt.
Nec remorantur ibi: sic rerum Summa novatur
Semper, & inter se mortales mutua vivunt.
Augescunt aliæ gentes, aliæ minnuntur:
Inque brevi spatio mutantur sæcla animantum:
Et, quasi Cursores, vitaï lampada tradunt.
Si cessare putas rerum Primordia posse,
Cessandoque novos rerum progignere Motus:
Avius à vera longe ratione vagaris.

Nam,

Motion they poſſeſs, to force their way thro' all the mighty Void.

For certain it is, that no [d] Seeds of Matter ſtick cloſe and unmov'd among themſelves; for we ſee every thing grows leſs, and perceive all Things wear away by a long Tract of Time, and old Age removes them quite from our Sight. And yet the Maſs of Things ſtill remains ſafe and entire; and for this Reaſon, becauſe the Particles of Matter which fall off, leſſen the Bodies from whence they fall, but add to thoſe to which they join. Theſe they force to decay; thoſe, on the contrary, they increaſe: Nor do they remain in this Poſture. And thus the Univerſe of Things is continually renewing; Generations ſucceed one another, one Kind of Animal increaſes, another waſtes away; and in a ſhort time the living Creation is entirely changed, and, like [e] Racers, delivers the Lamp of Life to thoſe that are behind. *The Motion of the Seeds.*

But if you think the Seeds of Things can be at reſt, and, being themſelves unmov'd, can give Motion to Bodies, you wander wildly from the Way of true Reaſon. For ſince all the Seeds of

[d] He proves there is Motion from the Growth and Decreaſe of Things; for Things grow, becauſe ſome Particles of Matter fly, and adhere to them, and Things decreaſe, becauſe ſome minute Principles loſe their hold and fly away; and this cannot be done without Motion.

[e] He alludes to certain Games celebrated at *Athens* in honour of *Vulcan*, in which the Racers carried Torches in their Hands, and ſtrove who ſhould firſt reach the Goal, with his Torch not extinguiſhed. In this Conteſt, he whoſe Torch was extinguiſhed, yielded the Victory to him who came next after him; and he, in like manner, to the third: And therefore, as the Runner whoſe Torch went out yielded the Victory to the Follower, ſo a living Thing, when its Light of Life is extinguiſhed, gives up to another living Thing, as it were, its Lamp of Life.

Nam, quoniam per Inane vagantur, cuncta neceſſe'ſt
Aut Gravitate ſua ferri Primordia rerum,
Aut ictu forte alterius: nam cita ſupernè
Obvia cum flixere, fit, ut diverſa repente
Diſſiliant: neque enim mirum, Duriſſima quæ ſint,
Ponderibus ſolidis, neque quicquam à tergis obſtet.
Et quo jactari magis omnia Materiaï
Corpora pervideas, reminiſcere Totius imum
Nil eſſe in Summa: neque habere ubi Corpora prima
Conſiſtant: quoniam Spatium ſine fine, modoque'ſt:
Immenſumque patere in cunctas undique parteis,
Pluribus oſtendi, & certa ratione probatu'ſt.
Quod quoniam conſtat, nimirum nulla quies eſt
Reddita Corporibus primis per Inane profundum:
Sed magis aſſiduo, varioque exercita motu,
Partim intervallis magnis conflicta reſultant:
Pars etiam brevibus ſpatiis nexantur ab Ictu.
Et quæcunque magis condenſo conciliatu,
Exiguis intervallis connexa reſultant.

Indupedita

Things are rambling through the Void, they must necessarily be born along either by their own natural Gravity, or by the outward Stroke of something else [f]; for when these Seeds tending downwards meet with others, they must all fly off, and rebound a different way, and no wonder, since they are hard Bodies, and of solid Weight; nor is there any thing behind to stop the Motion: But, that you may perceive more plainly how all the Seeds of Matter are tossed about, you must recollect, that there is no such thing in the Universe as the *Lowest Place*, where the first Seeds may remain fixed, because I have shewn fully, and proved by certain Reason, that Space is without End, without Bounds immense, and lies extended every way.

This being plain, there can be no Rest possibly allowed to these first Seeds, for ever wandering through the empty Void; but being tossed about with constant and different Motion, and striking against other Bodies [g], some rebound to a great Distance, others fly off, but not so far; such of them as rebound but for a small Distance, their Contexture being more close, and being hinder'd

[f] The Seeds being solid are therefore heavy, and heavy Things tend downwards, and in their Descent lighting upon Bodies that are either at rest, or move more slowly than themselves, they must necessarily rebound; and this is the Cause of the ascending Motion, which is violent, the other is natural, and both are necessary to the Generation and Dissolution of Things.

[g] Since the Seeds are in continual Motion, and strike and rebound, this Rebounding is made to unequal Distances; those Seeds that rebound to a less Distance, and are tossed in a narrower Space, compose hard Bodies, as Iron and Stone; and such as rebound to a greater Distance, and wander in a wider Space, compose Bodies that are soft and rare, such as Air and Fire.

by

Indupedita ſuis perplexis ipſa figuris ;
Hæc validas Saxi radices, & fera Ferri
Corpora conſtituunt, & cætera de genere horum
Paucula : Quæ porro magnum per Inane vagantur,
Et cita diſſiliunt longe, longèque recurſant
In magnis intervallis : hæc Aëra rarum
Sufficiunt nobis, & ſplendida lumina Solis.
Multaque prætereà magnum per Inane vagantur,
Conciliis rerum quæ ſunt rejecta, nec uſquam
Conſociare etiam motus potuere recepta :
Cujus, uti memoro, rei ſimulacrum, & imago
Ante oculos ſemper nobis verſatur, & inſtat.
Contemplator enim, cum Solis lumina cunque
Inſertim fundunt radios per opaca domorum :
Multa minuta modis multis per Inane videbis :
Corpora miſceri radiorum lumine in ipſo :
Et velut æterno certamine prælia, pugnaſque
Edere turmatim certantia : nec dare pauſam,
Conciliis, & diſcidiis exercita crebris :
Conjicere ut poſſis ex hoc, Primordia rerum,
Quale ſit, in magno jactari ſemper Inani,
Duntaxat rerum magnarum parva poteſt res
Exemplare dare, & veſtigia notitiaï.
Hoc etiam magis hæc animum te advertere par eſt
Corpora, quæ in Solis radiis turbare videntur :
Quod tales turbæ motus quoque Materiaï
Significant clandeſtinos, cæcoſque ſubeſſe.
Multa videbis enim plagis ibi percita cæcis
Commutare viam, retròque repulſa reverti
Nunc huc, nunc illuc, in cunctas denique parteis.

Scilicet

by their natural Twinings, these compose the solid Roots of Rocks, and the hard Bodies of Iron, and a few other Things of the same Nature; but such as wander widely through the *Void*, and moved by the Blow, fly further off, and rebound to greater Distances; these compose the thin Air, and the Sun's brighter Light.

Besides, there are many Seeds keep wandering through the Void, that are refused all Union with other Seeds, nor could ever be admitted to join their Motion to any thing else. An Instance or Representation of this, as I conceive, is always at hand, and visibly before our Eyes. When the Sun's Light shoots its Rays through a narrow Chink into a darkned Room, you shall see a thousand little Atoms dance a thousand ways through the empty Space, and mingle in the very Rays of Light, engaging, as it were, in endless War, drawing up their little Troops, never taking breath, but meeting and exercising their hostile Fury with constant Blows. And hence you may collect, in what Manner the Principles of Things are tossed in this empty Void; so small an Instance will give you an Example of these extraordinary Motions, and open a Way to your Knowledge of greater Events.

But here it is fit you should apply yourself more closely to observe these Bodies which seem so disturbed in the Sun's Beams; for it appears by these Disorders, that there are certain secret Principles of Motion in the Seeds themselves, tho' invisible to us; for some of these Motes you will see struck by secret Blows, and forc'd to change their Course, sometimes driven back, then again returning, now this, now that, and every other way; and this Variety of Motion is certainly

Scilicet hic à Principiis eſt omnibus error.
Prima moventur ènim per ſe Primordia rerum
Inde ea, quæ parvo ſunt Corpora conciliatu,
Et quaſi proxima ſunt ad vireis Principiorum,
Ictibus illorum cæcis impulſa cientur:
Ipſaque, quæ porro paullo majora, laceſſunt.
Sic à Principiis aſcendit motus, & exit
Paullatim noſtros ad ſenſus, ut moveantur
Illa quoque, in Solis quæ lumine cernere quimus;
Nec quibus id faciant Plagis apparet apertè.
Nunc, quæ Mobilitas ſit reddita Materiaï
Corporibus, paucis licet hinc cognoſcere, MEMMI.
Primum Aurora novo cum ſpargit lumine terras,
Et variæ volucres nemora avia pervolitantes,
Aëra per tenerum liquidis loca vocibus opplent:
Quam ſubitò ſoleat Sol ortus tempore tali
Conveſtire ſua perfundens omnia luce,
Omnibus in promptu, manifeſtumque eſſe videmus.
At Vapor is, quem Sol mittit, lumenque ſerenum,
Non per Inane meat vacuum, quò tardiùs ire
Cogitur, aërias quaſi cum diverberet undas:

Nec

certainly in the [h] very Seeds; for the Principles of Things firſt move of themſelves, then compound Bodies that are of the leaſt Size, and approach neareſt, as it were, to the Exility of the firſt Seeds, are by them ſtruck with Blows unſeen, and put into Motion, and theſe again ſtrike thoſe that are ſomething larger; ſo from firſt Seeds all Motion ſtill goes on, till at length it becomes ſenſible to us; and thus we ſee how thoſe Motes that play in the Sun's Beams are moved, tho' the Blows by which they are driven about do not ſo plainly appear to us.

The Swiftneſs of the Seeds.

And now, my *Memmius*, you may in brief, from the following Inſtance, collect how rapid is the Motion of the firſt Seeds; for when the Morning ſpreads the Earth with riſing Light, and ſweet Variety of Birds frequent the Woods, and fill each Grove with moſt delightful Notes through the ſoft Air, every one perceives, and the Thing we ſee is plain, how ſuddenly, and in a moment, the riſing Sun covers the World, and ſhines with inſtant Light. But that Vapour, that glittering Ray, which the Sun ſends forth, does not paſs through meer empty [i] Space, and therefore is forced to move ſlower, as it has the reſiſting Air to part and divide as it goes; nor

[h] Since all Bodies will keep the ſame Line, unleſs they are diverted by ſome outward Violence, or by the Preſſure of their own interior Weight, it follows that ſome Motions of the Seeds, tho' inviſible to the Eye, agitate thoſe Motes or little Bodies, and drive them about in that manner; for he inſiſts, that all Motion that is obſerv'd in Things is in the Seeds themſelves.

[i] The Heat of the Sun paſſes through the Air, which is full of Atoms and other Bodies, as Winds and Exhalations, which hinder the Courſe of his Rays; and the Corpuſcles of Light paſs not through the whole Air in an inſtant of Time; nor ſingly one by one, but conglobed and intangled in one another, which muſt hinder the Swiftneſs of their Motion.

Nec singillatim corpuscula quæque Vaporis,
Sed complexa meant inter se, conque globata.
Quapropter simul inter se retrahuntur, & extra
Officiuntur, uti cogantur tardiùs ire.
At, quæ sunt solida Primordia simplicitate,
Cum per Inane meant Vacuum, nec res remoratur
Ulla foris, atque ipsa suis è partibus unum,
Unum in quem cœpere locum connixa feruntur:
Debent nimirum præcellere Mobilitate,
Et multò citiùs ferri, quàm lumina Solis:
Multiplexque loci spatium transcurrere eodem
Tempore, quo Solis pervolgant fulgura cœlum:
Nam neque consilio debent tardata morari,
Nec perscrutari Primordia singula quæque,
Ut videant, qua quidque geratur cum ratione.
At quidam contra hæc, IGNARI *Materiaï*
Naturam non posse Deûm sine numine rentur
Tantopere humanis rationibus, ac moderatis
Tempora mutare annorum, frugesque creare:

Nec

are the Principles that compoſe this Ray ſimple firſt Seeds, but certain little globular Bodies made up of theſe firſt Seeds, that paſs thro' the Air; and theſe firſt Seeds being agitated by various Motions, theſe little Bodies which are form'd of them are retarded by different Motions within themſelves, and are likewiſe hinder'd from without by other Bodies, and ſo are obliged to move the ſlower.

But Seeds that are ſolid and ſimple in their Nature, when they paſs through a pure Void, having nothing to ſtop them from without, and being one, and uncompounded thro' all their Parts, are carried at once, by an inſtant Force, to the Point to which they firſt ſet out. Such Seeds muſt exceed the Rays of the Sun in their Motion, and be carried on with much more Celerity; they muſt pierce through longer Tracts of Space in the ſame Time in which the Sun-Beams paſs through the Air; for theſe Seeds cannot agree together by Deſign, to move ſlowly, nor ſtop in the Air to ſearch into Particulars, and be ſatisfied for what Reaſon their ſeveral Motions are thus carried on and diſpoſed.

But ſome object to this, Fools as they are, and conceive that [k] ſimple Matter cannot of it ſelf, without the Aſſiſtance of the Gods, act ſo agreeably to the Advantage and Convenience of Mankind, as to change the Seaſons of the Year,

[k] He moſt ridiculouſly inſiſts, that Matter, rude as it was, did make this World without Art or Deſign; that Pleaſure is the Guide and Life of Man, that all Things are govern'd by her, and that the World nor any Thing elſe was made for the Uſe of Man; and then promiſes in another Place to ſhew, that the Frame of this World is ſo ill contrived, that it would be a Scandal to the Gods to charge them with the Creation of it.

Nec jam cætera, mortaleis quæ ſuadet adire,
Ipſaque deducit dux vitæ DIA VOLUPTAS,
Ut res per Veneris blanditim ſæcla propagent,
Ne genus occidat Humanum: Quorum omnia cauſa
Conſtituiſſe Deos fingunt, ſed in omnibu' rebus
Magnopere à vera lapſi ratione videntur.
Nam quamvis rerum ignorem Primordia quæ ſint,
Hoc tamen ex ipſis Cœli rationibus auſim
Confirmare, aliiſque ex rebus reddere multis,
Nequaquam nobis Divinitùs eſſe creatam
Naturam mundi, quæ tanta 'ſt prædita culpa:
Quæ tibi poſteriùs, MEMMI, *faciemus aperta;*
Nunc id quod ſupereſt de Motibus expediemus.
Nunc locus eſt (ut opinor) in his illud quoque rebus
Confirmare Tibi, nullam rem poſſe ſua vi
Corpoream ſurſum ferri, ſurſumque meare.
Ne tibi dent in eo Flammarum corpora fraudem:
Surſus enim vorſus gignuntur, & augmina ſumunt:
Et ſurſum nitidæ Fruges, Arbuſtaque creſcunt,
Pondera quantum in ſe 'ſt, cum deorſum cuncta ferantur.
Nec cùm ſubſiliunt Ignes ad tecta domorum,
Et celeri flamma deguſtant tigna, trabeiſque,
Sponte ſua facere id, ſine vi ſubigente, putandu 'ſt:
Quod genus, è noſtro cum miſſus corpore Sanguis

Emicat

to produce the Fruits, and do other Things which Pleaſure, (the Deity and great Guide of Life,) perſuades Men to value and eſteem. It could not induce us to propagate our Race, by the Blandiſhments of tender Love, leſt the Species of Mankind ſhould be extinct, for whoſe ſake they pretend the Gods made all the Beings of the World; but all Conceits like theſe fall greatly from the Dictates of true Reaſon: for tho' I were entirely ignorant of the Riſe of Things, yet from the very Nature of the Heavens, and the Frame of many other Bodies, I dare affirm and inſiſt, that the Nature of the World was by no means created by the Gods upon our account, it is ſo very faulty and imperfect; which, my *Memmius*, I ſhall hereafter fully explain. But now let us explain what remains to be ſaid of Motion.

All Things naturally deſcend.

And here, I think, is the proper Place to prove to you, that no [k] Being can be carried upwards, or aſcend by any innate Virtue of its own, leſt by obſerving the Tendency of Flame, you ſhould be led into a Miſtake. For Flame, you know, is born upwards, as well when it begins to blaze, as when it is increaſed by Fuel; ſo the tender Corn and lofty Trees grow upwards. Nor when the Flames aſpire, and reach the Tops of Houſes, and catch the Rafters and the Beams with a fierce Blaze, are you to ſuppoſe they do this by voluntary Motion, and not compelled by Force. 'Tis the ſame when the Blood guſhes

[k] He had ſaid before, that the Seeds tend downwards; and to the Objection that Fire moves upwards, he anſwers, that Plants and Trees riſe upwards likewiſe, by reaſon of the driving Force which breaks out of the Earth, and compels them to grow by Aſcent. The ambient Air drives the Flames upwards, and makes it yield to an Element more denſe than it ſelf.

Emicat exſultans altè, ſpargitque cruorem.
Nonne vides etiam, quanta vi Tigna Trabeiſque
Reſpuat humor Aquæ? nam quam magi' merſimus altum
Directa, & magna vi multi preſſimus ægrè;
Tam cupidè ſurſum revomit magis, atque remittit,
Plus ut parte foras emergant, exſiliantque.
Nec tamen hæc, quantu 'ſt in ſe, dubitamus, opinor,
Quin vacuum per Inane deorſum cuncta ferantur.
Sic igitur debent Flammæ quoque poſſe per auras
Aëris expreſſæ ſurſum ſuccedere; quanquam
Pondera, quantum in ſe 'ſt, deorſum deducere pugnent:
Nocturnaſque faces Cœli ſublime volanteis
Nonne vides longos flammarum ducere tractus,
In quaſcunque dedit parteis Natura meatum?
Non cadere in terram Stellas, & Sidera cernis?
Sol etiam ſummo de vertice diſſupat omneis
Ardorem in parteis, & lumine conſerit arva:
In terras igitur quoque Solis vergitur ardor.
Tranſverſoſque volare per imbres Fulmina cernis:
Nunc hinc, nunc illinc abrupti nubibus Ignes
Concurſant, cadit in terras vis Flammea volgò.
Illud in his quoque Te rebus cognoſcere avemus:
Corpora cum deorſum rectum per Inane feruntur,
Ponderibus propriis incerto tempore ferme,

Incertiſque

from a Vein, it ſpouts bounding upwards, and ſprinkles all about the purple Stream. Don't you obſerve likewiſe, with what Force the Water throws up the Beams and Poſts of Wood? The more we plunge them in, and preſs them down with all our Might, the more forcibly the Stream ſpews them upwards, and ſends them back; ſo that they riſe, and leap up at leaſt half their thickneſs above the Water. And yet I think, we make no queſtion that all Things, as they paſs through empty Void, are carried naturally down below. So likewiſe the Flame riſes upwards, being forcibly preſſed through the Air, tho' its Weight, by its natural Gravity, endeavours to deſcend. Don't you ſee the nightly Meteors of the Sky flying aloft, and drawing after them long Trains of Flame, which way ſoever Nature yields a Paſſage? Don't you ſee alſo the [1] Stars and fiery Vapours fall downwards upon the Earth? The Sun too ſcatters from the Tops of Heaven his Beams all round, and ſows the Fields with Light: Its Rays therefore are downwards ſent to us below. You ſee the Lightning through oppoſing Showers fly all about; the Fires burſt from Clouds, now here now there engage, at length the burning Vapour falls down upon the Ground.

I DESIRE you would attend cloſely upon this Subject, and obſerve that Bodies, when they are carried downwards through the *Void* in a ſtrait Line, do at ſome time or other, but at no fix'd and determinate Time, and in ſome Parts of the *Void* likewiſe, but not in any one certain and de-

[1] The Stars never fall, but he means a fat, oily, and ſulphurous Exhalation, which kindles in the Air, and falls to the ground in a purple-colour'd Jelly.

Incertisque locis spatio decedere paullùm:
Tantùm quod Momen mutatum dicere possis.
Quod nisi Declinare solerent, omnia deorsum,
Imbris uti guttæ, caderent per Inane profundum:
Nec foret Offensus natus, nec Plaga creata
Principiis: ita nil unquam Natura creasset.
Quòd si forte aliquis credit Graviora potesse
Corpora, quò citiùs rectum per Inane feruntur,
Incidere è supero Levioribus, atque ita Plagas
Gignere, quæ possint genitaleis reddere motus:
Avius à vera longè ratione recedit.
Nam per Aquas quæcunque cadunt, atque Aëra deorsum:
Hæc pro ponderibus casus celerare necesse 'st,

Propterea,

terminate Place of it, decline a little from the direct Line by their own Strength and Power; so nevertheless, that the direct Motion can be said to be chang'd the least that can be imagined. [m] If the Seeds did not decline in their Descent, they would all fall downwards through the empty Void, like Drops of Rain; there would be no Blow, no Stroke given by the Seeds overtaking one another, and by consequence Nature could never have produced any Thing.

BUT if any one should suppose, that the heavier Seeds, as they are carried by a swift Motion through the Void in a strait Line, might overtake, and fall from above upon the lighter, and so occasion those Strokes which produce a genial Motion by which Things are formed, he is entirely out of the way, and wanders from the Rule of true Reason. [n] Indeed, whatsoever falls downward through the Water, or through the Air, must necessarily have its Speed hastened in pro-

[m] If the Seeds descended through the Void in a direct Line, and with equal Swiftness, they could never meet nor overtake one another; and therefore he insists upon this Declination of Motion, otherwise his Atoms could never have met, and consequently there could have been no Generation whatever; and from this Declaration proceed the Conjunctions, Unions, and Adhesions of the Atoms to one another and among themselves, by which the World was made, and all Things contained in it.

[n] He says, that all Seeds are hurried through the Void with equal Swiftness; he grants that the Medium through which they pass, may hasten or retard their Motion, and that Bodies of the same Matter, but different in Weight, when they fall through Water or Air, are not equally swift, which is false; but he will have the Motion to be the swifter, the more empty the Place is thro' which the Bodies move; so that where the Space is most void and empty, there the Motion is most swift; and be there ever so many Motions or Things moving in that Space, they are all of the like Swiftness.

Propterea, quia corpus Aquæ, naturaque tenuis
Aëris haud possunt æquè rem quamque morari:
Sed citiùs cedunt Gravioribus exsuperata.
At contra nulli de nulla parte, neque ullo
Tempore Inane potest Vacuum subsistere rei,
Quin, sua quod natura petit, concedere pergat.
Omnia quapropter debent per Inane quietum
Æquè ponderibus non æquis concita ferri.
Haud igitur poterunt Levioribus incidere unquam
Ex supero Graviora, neque Ictus gignere per se,
Qui varient motus, per quos Natura genat res.
Quare etiam atque etiam paullùm clinare necesse 'st
Corpora, nec plùs quàm minimùm, ne fingere motus
Obliquos videamur, & id res vera refutet.
Namque hoc in promptu, manifestumque esse videmus:
Pondera, quantum in se 'st, non posse Obliqua meare,
Ex supero cum præcipitant, quod cernere possis.
Sed nihil omnino recta regione viai
Declinare, quis est, qui possit cernere, sese?
Denique si semper motus connectitur omnis,
Et vetere exoritur semper novus ordine certo,
Nec Declinando faciunt Primordia motus
Principium quoddam, quod Fati fœdera rumpat,
Ex infinito ne causam causa sequatur:

Libera,

portion to its Weight; and for this Reaſon, becauſe the Body of the Water, and the thin Nature of the Air, cannot equally delay the Progreſs of every thing that is to paſs through it, but muſt be obliged to give way ſooneſt to heavy Bodies. But, on the contrary, mere empty Space cannot oppoſe the Paſſage of any thing in any manner; but muſt, as its Nature requires, continue for ever to give way: Therefore all Things muſt be carried with equal Force through a Void that cannot reſiſt, tho' their ſeveral Weights be unequal; ſo that the heavier Bodies can never fall from above upon the lighter, nor occaſion thoſe Blows which may change their Motions, and by which all Things are naturally produced.

It follows then, that the Seeds do every now and then decline a little from a direct Line in their Deſcent, tho' the leaſt that can be imagined, leſt we ſhould think their Motion were oblique, which the Nature of the Thing refutes. For we ſee this is plain and obvious, that Bodies by their natural Gravity do not obliquely deſcend, when they fall ſwiftly from above through a *Void*, which you may diſcover by your Eyes. But that Nothing declines in its Deſcent, ever ſo little from a direct Line, who is ſo ſharp-ſighted as to diſtinguiſh?

Besides, were all Motion of the Seeds uniform, and in a ſtrait Line, did one ſucceed another in an exact and regular Order, did not the Seeds, by their declining, occaſion certain Motions, as a Sort of Principle, to break the Bonds of Fate, and prevent a Neceſſity of Acting, and exclude a fix'd and eternal Succeſſion

Libera per terras unde hæc animantibus extat,
Unde eſt hæc (inquam) fatis avolſa Voluntas,
Per quam progredimur, quo ducit quemque voluptas?
Declinamus item motus, nec tempore certo,
Nec regione loci certa, ſed ubi ipſa tulit Mens.
Nam dubio procul his rebus ſua cuique Voluntas
Principium dat: & hinc motus per membra rigantur.
Nonne vides etiam patefactis tempore puncto
Carceribus, non poſſe tamen prorumpere Equorum
Vim cupidam tam deſubitò, quàm Mens avet ipſa?
Omnis enim totum per Corpus materiaï
Copia conquiri debet, concita per artus
Omneis, ut ſtudium Mentis connexa ſequatur:
Ut videas initum motus à Corde creari,
Ex Animique voluntate id procedere primum:
Inde dari porro per totum Corpus, & artus:
Nec ſimile 'ſt, ut cùm impulſi procedimus ictu,
Viribus alterius magnis, magnoque coactu,

Nam

ceſſion of Cauſes, which deſtroy all ° Liberty; whence comes that Free-will, whence comes it, I ſay, ſo ſenſibly obſerv'd in all Creatures of the World, who act as they pleaſe, wholly reſcued from the Power of Fate and Neceſſity? That Will by which we are moved which way ſoever our Inclination leads us? We likewiſe forbear to move, not at any particular Time, nor at any certain Place, but when and where our Mind pleaſes; and without doubt, the Will is the Principle that determines theſe Motions, and from whence all Motion is conveyed to the Limbs. Don't you obſerve, when the Barriers of the Liſts are thrown open of a ſudden, the eager Deſire of the Horſes cannot ſtart to the Race with that Celerity as their Mind requires? Becauſe the Spirits or Particles of Matter that maintain the Courſe, muſt be got together from all Parts of the Body, and ſtirr'd thro' every Limb, and fitly united, that they may readily follow the eager Deſire of the Mind. You ſee then, the Beginning of Motion riſes in the Heart, proceeds then by means of the Will, and is thence diffuſed thro' every Limb, over the whole Body.

But the Caſe is otherwiſe, when we act as we are compelled by Force, by the prevailing Power and the great Violence of another; for then we

° Every one perceives a Liberty in himſelf, and with Reaſon concludes, that the ſame Freedom is in other Animals, who we ſee vary their Motions as they liſt, and live as they pleaſe. We find, that when we are compelled to act by any outward Force, there is ſomething within us that reſiſts that Compulſion; that we perceive a great Difference within us, when we act by our own Will, and when we are compelled. There can be nothing of this Liberty in the Seeds themſelves; it muſt therefore be imputed to the Declination of the Atoms: for a direct Motion of them would deſtroy all our Freedom.

Nam tum materiam totius Corporis omnem
Perſpicuu 'ſt nobis invitis ire, rapique,
Donicum eam refrænavit per membra Voluntas.
Jamne vides igitur, quamquam vis extera multos
Pellit, & invitos cogit procedere ſæpe,
Præcipiteiſque rapit, tamen eſſe in pectore noſtro
Quiddam, quod contra pugnare, obſtareque poſſit,
Cujus ad arbitrium quoque copia materiaï
Cogitur interdum flecti per membra, per artus,
Et projecta refrænatur, retroque reſidit.
Quare in Seminibus quoque idem fateare neceſſe 'ſt,
Eſſe aliam præter Plagas, & Pondera cauſam
Motibus, unde hæc eſt nobis innata poteſtas:
De Nihilo quoniam fieri Nil poſſe videmus.
Pondus enim prohibet, ne Plagis omnia fiant,
Externa quaſi vi, ſed ne Mens ipſa neceſſum
Inteſtinum habeat cunctis in rebus agendis;
Et devicta quaſi cogatur ferre, patique:
Id facit exiguum CLINAMEN *Principiorum*
Nec regione loci certa, nec tempore certo.

feel plainly, that the whole Weight of our Body moves, and is urged on againſt our Conſent, till our Will reſtrains the Motion through all our Limbs. Don't you ſee now, that though an outward Force drives us on, and often compels us to proceed againſt our Will, and hurries us headlong, yet there is ſomething in the Heart that reſiſts and ſtrives againſt that Compulſion, at whoſe Command the Spirits or Particles of Matter are forced through the Nerves into the ſeveral Limbs and Members, and are curbed likewiſe by the ſame Nerves, and obliged to retire backwards.

Wherefore [p], you muſt needs confeſs there is ſomething elſe beſide Stroke and Weight, which is the Cauſe of thoſe Motions from whence this innate Power of our Will proceeds. We ſee Nothing can ariſe from Nothing; for Weight, which is natural to Bodies, hinders us to conclude, that all Things are moved by Stroke or outward Force; and leſt the Mind ſhould ſeem to act by ſome neceſſary Impulſe within itſelf, (that is, by Motion that proceeds from Weight) and overpower'd, be compelled, as it were, to bear and ſuffer, this is occaſioned by ever ſo little a Declination of the Seeds, which however is done at no certain or determinate Time or Place.

[p] This Freedom of Will cannot proceed from Stroke; for Motion by Stroke is an outward Force, which is contrary to Liberty; and Weight, tho' it be an inward Principle of Motion, yet ſince it tends downwards, and in the ſame manner, is an Enemy to Liberty likewiſe: Therefore Declination, which is neither made at any certain Time, nor in any certain Place, avoids that Neceſſity of which both Weight and Stroke are the Cauſe, and unlinks the Chain of Deſtiny.

Nor

Nec ſtipata magis fuit unquam Materiaï
Copia, nec porrò majoribus intervallis.
Nam neque adaugeſcit quicquam, neque deperit inde.
Quapropter quo nunc in motu Principiorum
Corpora ſunt, in eodem anteacta ætate fuere,
Et poſthac ſemper ſimili ratione ferentur;
Et quæ conſuerunt gigni, gignentur eadem
Conditione: & erunt, & creſcent, inque valebunt,
Quantum cuique datum 'ſt per fœdera Naturaï,
Nec rerum Summam commutare ulla poteſt vis.
Nam neque quo poſſit genus ullum Materiaï
Effugere ex Omni, quicquam 'ſt, neque rurſus, in Omne
Unde coörta queat nova vis irrumpere, & Omnem
Naturam rerum mutare, & vertere motus.
Illud in his rebus, non eſt mirabile, quare
Omnia cum rerum Primordia ſint in motu,
SUMMA *tamen ſumma videatur ſtare quiete,*
Præterquam ſi quid proprio dat corpore motus.
Omnis enim longè noſtris ab ſenſibus infra
PRIMORUM *natura jacet: quapropter ubi illa*
Cernere jam nequeas, motus quoque ſurpere debent:

Præſertim

Nor was [q] the Mass of Matter ever more close or more loose, nor did the Number of Seeds ever increase or diminish; and therefore the same Course in which the Seeds move now, the same Motion they had for the time past, and they will be carried on hereafter in the very same manner; and the Things that have been hitherto produced, shall be formed again in the same way; they shall come into Being, grow, and arrive at Perfection, as far as the Laws of their respective Natures will admit: For this Universe of Things no Force can change; neither is there any Place into which the least Particle of Matter may fly off from the whole Mass; nor is there a Place from whence any new Seeds may break in upon this *All*, and so change the Nature of Things, and disorder their Motions.

There is Nothing wonderful in this, that when all the [r] Principles of Things are in continual Motion, the *Whole* should at the same time seem to be at perfect Rest, tho' every particular Body has a sort of Motion peculiar to itself; for the Nature of first Seeds is so subtil, that they lie far beyond the Reach of our Sense; and therefore, since you cannot perceive them by the Eye, their Motions are much less to be discern'd;

[q] He had taught, that the Seeds are not liable to Change; now he asserts, that the universal Mass of Matter can neither increase nor diminish, that the Motions of the Seeds are immutable, and therefore, that whatever has been produced heretofore, the same may be produced now.

[r] If it should be objected against this perpetual Motion of the Atoms, that the All or Universe appears quiet, and seems buried in a profound Tranquillity; he says, that the Motions of the Seeds must needs be imperceptible, since the Seeds themselves are invisible to the sharpest Sight; and adds, that the Motion even of sensible Things, cannot be perceiv'd at a great Distance.

especially,

Præsertim cùm, quæ possimus cernere, celent
Sæpe tamen motus spatio diducta locorum.
Nam sæpe in colli tondentes pabula læta
Lanigeræ reptant Pecudes, quo quamque vocantes
Invitant herbæ gemmantes rore recenti:
Et satiati Agni ludunt, blandéque coniscant:
Omnia quæ nobis longè confusa videntur,
Et veluti in viridi candor consistere colli.
Præterea magnæ Legiones cum loca cursu
Camporum complent, belli simulacra cientes:
Et circumvolitant Equites, mediosque repente
Tramittunt valido quatientes impete campos:
Fulgur ibi ad Cœlum se tollit, totaque circum.
Ære renidescit Tellus, subterque virûm vi
Excitur pedibus sonitus, clamoreque Montes
Icti rejectant voces ad Sidera mundi:
Et tamen est quidam locus altis montibus, unde
Stare videtur, & in campis consistere Fulgur.
Nunc age jam deinceps cunctarum exordia rerum,
Qualia sint, & quam longè distantia formis,
Percipe, multigenis quàm sint variata FIGURIS:
Non quòd multa parum simili sint prædita forma,
Sed quia non volgò paria omnibus omnia constant.

eſpecially, as we obſerve many Things are diſcover'd to us by our Sight, whoſe Motions we cannot perceive, by being placed at a remote Diſtance from us. For oft the woolly Flock upon a Hill wander about, and crop the tender Graſs, where-e'er the ſweet Herbs crowned with pearly Dew invite; the Lambs, their Bellies full, wantonly play, and try their tender Horns: All this to us ſtanding far off, appears confuſed, and like a ſteady White ſpread o'er the Green. And thus a mighty Army fills the Plain, and moves about, and acts a real Fight; the Horſe ſcour o'er the Field, and wheel at once, and in the Centre charge, and ſhake the Ground with mighty Force; the Blaze of Arms darts up to Heaven, all the Earth around glitters with brazen Shields, and groans beneath the Feet of Men enraged; the neighbouring Hills, ſtruck with the Noiſe, rebound it to the Skies; yet place yourſelf upon a Mountain-top, to view this wild Confuſion, and you'd think it was a fixed and ſteady Light that filled the Plain.

Now learn at length the [s] Form of theſe firſt Seeds, theſe Principles of Things, how widely different is their Shape, of what Variety of Figure their Frame conſiſts; for tho' many are endowed with a Form not much unlike, yet all are far from being of the ſame Figure. And no

[s] He makes his Atoms of different Figures, not that their Shape is diſcernible by the Eye, any more than their Magnitude; but becauſe their different Figuration may be proved by many Arguments: he ſays, in any Things whatever the greater their Number is, the greater for the moſt part is the Variety of their Figures. He argues further for the different Figures of his Atoms, from the various Shapes and Figures of all natural Things compoſed of them; and ſhews this different Figuration not only in all kind of Things taken collectively, but even in the Individuals of the ſame kind.

wonder;

Nec mirum: nam cùm sit eorum Copia tanta,
Ut neque finis (uti docui) neque Summa sit ulla:
Debent nimirum non omnibus omnia prorsum
Esse pari filo, similique affecta Figura.
Præterea genus Humanum, mutæque natantes
Squammigerûm Pecudes, & læta Arbusta, Feræque,
Et variæ Volucres, lætantia quæ loca aquarum
Concelebrant circum ripas, fonteisque, lacusque:
Et quæ pervolgant nemora avia pervolitantes:
Horum unum quodvis generatim sumere perge,
Invenies tamen inter se distare Figuris.
Nec ratione alia Proles cognoscere Matrem,
Nec Mater posset Prolem: quod posse videmus,
Nec minùs atque homines inter se nota cluere.
Nam sæpe ante Deûm vitulus delubra decora
Turicremas propter mactatus concidit aras,
Sanguinis exspirans calidum de pectore flumen,
At Mater virideis saltus orbata peragrans,
Linquit humi pedibus vestigia pressa bisulcis,
Omnia convisens oculis loca, si queat usquam
Conspicere amissum Fœtum: completque querelis
Frundiferum nemus adsistens; & crebra revisit
Ad stabulum, desiderio perfixa Juvenci:
Nec teneræ salices, atque herbæ rore vigentes,
Fluminaque ulla queunt summis labentia ripis,
Oblectare animum, subitamque avertere curam:
Nec Vitulorum aliæ species per pabula læta
Derivare queunt aliò, curaque levare:
Usque adeo quiddam proprium, notumque requirit.
Præterea teneri tremulis cum vocibus Hædi
Cornigeras nôrunt Matres, Agnique petulci

Balantum

wonder; for ſince (as I have ſaid) their Number is ſo great, that no End, no Bound is to be ſet to them, they ought, for the ſame Reaſon, to be all of a different Contexture, and not faſhioned alike of the ſame Form.

Besides, conſider well Mankind, the ſcaly Fry of ſilent Fiſh that ſwim the Flood, the verdant Trees, wild Beaſts, the various kind of Birds, ſuch as flock about the Banks of pleaſant Streams, the Fountains and the Lakes, and thoſe who frequent the thick Covers of the Woods, conſider all theſe in their ſeveral Kinds, and you will find them all conſiſt of Forms different among themſelves. 'Tis by nothing elſe the tender Young knows its own Dam, and thus the Dam diſtinguiſhes her Young; thus we ſee each Creature knows its own Kind, no leſs than Men, and ſo unite together. For oft before the gilded Temples of the Gods, a young Heifer falls a ſlain Victim beſide the Altar flaming with Incenſe, and breathes from her Heart a reeking Stream of Blood. The Dam, robbed of her Young, beats o'er the Fields, and leaves the Marks of her divided Hoofs upon the preſſed Graſs, and ſearches every Place with careful Eyes to find her Young ſhe loſt; then ſtops, and fills the branched Woods with her Complaints, and oft returns back to her Stall, diſtracted with the Love of her dear Young; no more the tender Willows, or the Herbs freſhned with Dew, nor can the running Streams within full Banks divert her Mind, or turn away her Care; nor can a thouſand other Heifers, as they play wantonly o'er the Graſs, take off her Eye, or eaſe the Pain ſhe feels; ſo plain it is ſhe ſearches for her own, for what ſhe knows full well. And thus the tender Kids find by their Bleat their horned Dams, and

Balantum pecudes: ita, quod natura repoſcit,
Ad ſua quiſque fere decurrunt ubera lactis.
Poſtremo quodvis Frumentum, non tamen omne
Quodque ſuo in genere inter ſe ſimile eſſe videbis,
Quin intercurrat quædam diſtantia formis,
Concharumque genus parili ratione videmus
Pingere telluris gremium, qua mollibus undis
Littoris incurvi bibulam pavit Æquor arenam.
Quare etiam atque etiam ſimili ratione neceſſe 'ſt,
Natura quoniam conſtant, neque facta manu ſunt,
Unius ad certam formam Primordia rerum,
Diſſimili inter ſe quædam volitare Figura.
Perfacile 'ſt jam animi ratione exſolvere nobis,
Quare Fulmineus multò penetralior ignis,
Quam noſter fluat è Tedis terreſtribus ortus.
Dicere enim poſſis cæleſtem FULMINIS *ignem*
Subtilem magis è parvis conſtare figuris:
Atque ideo tranſire foramina, quæ nequit ignis
Noſter hic è Lignis ortus, Tedaque creatus.
Præterea Lumen per cornu tranſit: at Imber
Reſpuitur: Quare? Niſi Luminis illa minora
Corpora ſunt, quàm de quibus eſt liquor Almus Aquarum:
Et quamvis ſubitò per colum Vina videmus
Perfluere, at contrà tardum cunctatur Olivum;
Aut quia nimirum majoribus eſt Elementis,
Aut magis hamatis inter ſe, perque plicatis.
Atque ideo fit uti non tam deducta repente
Inter ſe poſſint Primordia ſingula quæque
Singula per cujuſque foramina permanare.
Huc accedit, uti Mellis Lactiſque liquores
Jucundo ſenſu linguæ tractentur in ore;
At contrà tetra Abſinthî natura, ferique
Centaurî fœdo pertorquent ora ſapore:

ſo the ſporting Lambs know their own Flocks, and, as by Nature taught, each haſtes to the full Dug of its own Dam.

Observe again, the various Sorts of Corn, you'll find each Grain, tho' in Kind the ſame, not ſo much alike; but there will be a Difference in their Figure; and ſo a great Variety of Shells, we ſee, paints the Earth's Lap, where the Sea's gentle Waves feed the moiſt Sand along the winding Shore. And thus, by Parity of Reaſon, it muſt follow, that the firſt Seeds of Things, as they are formed by Nature, not made by Art in any certain Figure, muſt fly about in Shapes various and different among themſelves.

'Tis eaſy for us now to unfold the Difficulty, why the Flame of Lightning is much more penetrating than our common Fire raiſed from Fuel here below. You may give this Reaſon, that the ſubtil, celeſtial Fire of Lightning conſiſts of Particles much ſmaller, and ſo paſſes through Pores, which our Fire, made from Tow or Wood, cannot.

Besides, Light, we perceive, finds a way through Horn, but Water does not; becauſe the Principles of Light are ſmaller, than thoſe of which Water is compoſed. So we ſee Wine paſſes ſwiftly through a Strainer; on the contrary, heavy Oil moves ſlowly through, either becauſe it is made up of larger Seeds, or its Principles are more hooked and entangled among themſelves: and thus it happens, that the ſeveral Particles cannot be ſo ſoon ſeparated from one another, ſo as to flow through the little Holes with the ſame Eaſe. Thus it is, that Honey and Milk paſs in the Mouth with a pleaſing Senſation over the Tongue; on the contrary, the bitter Juice of Wormwood and ſharp Centaury torment the Palate

Ut facilè agnoſcas è lævibus, atque rotundis
Eſſe ea, quæ ſenſus jucundè tangere poſſunt:
At contrà quæ amara, atque aſpera cunque videntur,
Hæc magis hamatis inter ſe nexa teneri;
Proptereaque ſolere vias reſcindere noſtris
Senſibus, introituque ſuo perrumpere corpus.
Omnia poſtremo Bona ſenſibus, & Mala tactu,
Diſſimili inter ſe pugnant perfecta Figura:
Ne tu forte putes Serræ ſtridentis acerbum
Horrorem conſtare elementis lævibus æquè
Ac Muſæa mele, per chordas Organici quæ
Mobilibus digitis expergefacta figurant:
Neu ſimili penetrare putes Primordia forma
In nareis hominum, cum tetra Cadavera torrent,
Et cum Scena croco Cilici perfuſa recens eſt,
Araque Panchæos exhalat propter odores:
Neve bonos rerum ſimili conſtare Colores
Semine conſtituas, oculos qui paſcere poſſunt,
Et qui compungunt aciem, lacrymareque cogunt:
Aut fœda ſpecie tetri, turpeſque videntur.
Omnis enim ſenſus quæ mulcet cauſa, juvatque,
Haud ſine Principiali aliquo lævore creata 'ſt:
At contra, quæcunque moleſta, atque aſpera conſtat,
Non aliquo ſine Materiæ ſqualore reperta 'ſt.
Sunt etiam quæ jam nec Lævia jure putantur
Eſſe, neque omnino flexis mucronibus Unca:
Sed magis Angululis paullum proſtantibus, & quæ

Titillare

with a loathſome Taſte. From whence you collect eaſily, that thoſe Things which agreeably affect the Senſe, are compoſed of Particles ſmooth and round; and ſuch again that ſeem rough and bitter, are bound together by Parts more hooked, and cloſer twined; and therefore, they tear the way to our Senſes, and wound the Body as they enter through the Skin. In ſhort, ſuch Things as are agreeable to our Senſes, and thoſe that are rough and unpleaſant to the Touch, are oppoſite, and formed of a Figure very different from one another; leſt you ſhould think perhaps, that the grating Sound of the whetting of a Saw, was made of Parts equally ſmooth, without the ſoft Notes of a Lute, which the Muſician forms upon the Strings, awaked, as it were, by the gentle Strokes of his Fingers.

Nor are you to ſuppoſe, that the Seeds are of the ſame Form which ſtrike upon our Nerves of Smell, when a filthy Carcaſe is burning, or when the Stage is freſh-ſprinkled with *Cilician* Saffron, or the Altar ſweetens the Air with the Odour of *Arabian* Incenſe.

And ſo in Colours, you muſt not imagine ſuch as are agreeable, and delight our Eyes, are compoſed of the ſame faſhioned Seeds with thoſe which prick our Senſe, and force us to weep, or ſeem dark or ugly, and ſhocking in appearance to us; for whatever pleaſes and delights our Senſe, cannot be compoſed but of ſmooth Particles; and, on the contrary, Things that are hurtful and harſh, cannot be formed without Seeds that are filthy and diſagreeable.

There are other Seeds likewiſe, which you cannot properly call ſmooth, nor are altogether hooked, with their Points bent, but are rather ſhaped with ſmall Angles, a little jutting out, and

Titillare magis ſenſus, quam Lædere poſſunt:
Fœcula jam quo de genere 'ſt, Inulæque ſapores.
Denique jam calidos Igneis, gelidamque Pruinam,
Diſſimili dentata modo compungere ſenſus
Corporis, indicio nobis eſt Tactus uterque.
TACTUS *enim, Tactus (pro Divûm numina ſancta!)*
Corporis eſt ſenſus, vel cùm res Extera ſeſe
Inſinuat, vel cùm lædit, quæ in corpore nata 'ſt,
Aut juvat egrediens genitaleis per Veneris res:
Aut ex Offenſu cum turbant Corpore in ipſo
Semina, confunduntque inter ſe concita ſenſum:
Ut ſi forte manu quamvis jam Corporis ipſe
Tute tibi partem ferias, æquè experiare.
Quapropter longè formas diſtare neceſſe 'ſt,
Principiis, varios quæ poſſint edere ſenſus.
Denique, quæ nobis Durata ac Spiſſa videntur,
Hæc magis hamatis inter ſeſe eſſe neceſſe 'ſt,
Et quaſi ramoſis altè compacta teneri.
In quo jam genere in primis Adamantina ſaxa,
Prima acie conſtant, ictus contemnere ſueta,
Et validi Silices, ac duri robora Ferri,
Æraque, quæ clauſtris reſtantia vociferantur.

Illa

may be ſaid rather to tickle than to hurt the Senſe; ſuch is the [t] acid Taſte of the ſweet Sauce made of the Lees of Wine, or the ſweet Sauce made of the ſweetiſh-bitter Root of Elecampane. Laſtly, that [u] burning Heat, or freezing Cold, being formed of Seeds of different Figures, do affect the Body with different Senſation, our Touch is Evidence ſufficient to evince.

Touch what it is.

For Touch, the Touch (bleſſed be the Gods above!) is a Senſe of the Body, either when ſomething from without enters through the Pores, or ſomething from within hurts us, as it forces its way out, or pleaſes, as the Effect of Venery tickles as it paſſes through, or when the Seeds, by ſtriking againſt each other, raiſe a Tumult in the Body, and in that Agitation confound the Senſe; and this you may ſoon experience, if you ſtrike yourſelf in any Part with a Blow of your Hand. It is neceſſary therefore, that the Principles of Things ſhould conſiſt of Figures very different in themſelves, ſince they affect the Senſes in ſo different a manner.

Further, thoſe Things which appear to us hard and thick, muſt neceſſarily be joined together by Particles more hooked among themſelves, and be held cloſe by branched Seeds. In the firſt Rank of theſe, you are to place the Rocks of Adamant, that defy the Force of Blows, and ſolid Flints, and the Strength of hard Iron, and brazen Hinges, that creak under the Weight of

[t] The *Fæcula* and the *Inula* were two Sauces of the *Romans*; the one was acid, made of the Lees of Wine; the other ſweet, made of the ſweetiſh bitter Root of the Herb *Inula*, Elecampane.

[u] It was the Opinion of *Epicurus*, that the Seeds of Fire, ſince they pricked the Senſe, had ſome prominent Angles; and that the Seeds of Cold had a Trigonical or Pyramidal Figure, that is, their Figure conſiſted of four triangular Faces.

Illa autem debent ex Lævibus atque Rotundis
Esse magis, fluido quæ corpore Liquida constant:
Nec retinentur enim inter se glomeramina quæque,
Et procursus item in proclive volubilis extat.
Omnia postremò quæ puncto tempore cernis
Diffugere, ut Fumum, Nebulas, Flammasque necesse 'st,
Si minùs omnibu' sunt è Lævibus atque Rotundis,
At non esse tamen perplexis indupedita,
Pungere uti possint corpus, penetrareque saxa:
Nec tamen hærere inter se, quod quisque videmus
Sentibus esse datum: Facilè ut cognoscere possis
Non è Perplexis, sed Acutis esse Elementis.
Sed quod Amara vides eadem quæ fluvida constant,
Sudor uti Maris est, minimè id mirabile habendum.
Nam quod fluvidum est, è Lævibus atque Rotundis
Est, at Lævibus, atque Rotundis mista doloris
Corpora; nec tamen hæc retineri Hamata necesse 'st:
Scilicet esse globosa, tamen cùm Squalida constent,
Provolvi simul ut possint, & lædere sensus.
Et quò mista putes magis aspera lævibus esse
Principiis, unde 'st Neptuni corpus acerbum:
Est ratio secernundi, seorsumque videndi.
Humor dulcit ubi per terras crebriùs idem
Percolatur, ut in foveam fluat, ac mansuescat.
Linquit enim suprà tetri Primordia viri

their Gates. But Liquids that conſiſt of fluid Bodies, muſt be formed of Seeds more ſmooth and round; for their globular Particles are not intangled among themſelves, and their flowing Motion rolls on forward with the greater Eaſe.

But, laſtly, all ſuch Things which you obſerve inſtantly to ſcatter, and fly away as Smoke, Clouds, and Flame, if they do not conſiſt altogether of Particles that are ſmooth and round, yet neither are they formed of hooked Seeds, and therefore may pierce through Bodies, and penetrate into Stones; nor do their Particles nevertheleſs ſtick mutually to one another, as we obſerve the Particles of Thorns do: From thence you may eaſily conclude, that they are not compoſed of hooked or intangled, but of acute Principles.

The Sea-water fluid and bitter.

But becauſe you ſee the ſame Things are bitter and fluid, as the Sea-water, are you to wonder in the leaſt at this; For what is fluid, is formed of Principles that are ſmooth and round; but with theſe ſmooth and round Seeds, are mixed others that are ſharp, and give pain; Yet there is no Neceſſity, that theſe ſharp Seeds ſhould be hooked and twined together; it is ſufficient, that they be globous as well as rough, that they may be qualified to flow along in their proper Courſe, as well as to hurt the Senſe.

And that you may the ſooner believe, that theſe ſharp Seeds are mixed with thoſe that are ſmooth, from whence the Body of the Sea becomes ſalt, the way is to ſeparate them, and conſider them diſtinct; for the Sea-water grows ſweet by being often philter'd through the Earth, and ſo fills the Ditches, where it becomes ſoft: for it leaves behind the pungent Seeds of the

rough

Aſpera, quò magis in terris hæreſcere poſſunt.
Quod quoniam docui, pergam connectere rem, quæ
Et hoc apta fidem ducit: Primordia rerum
Finita variare FIGURARUM *ratione.*
Quod ſi non ita ſit, rurſum jam Semina quædam
Eſſe infinito debebunt corporis auctu.
Namque in eadem una cujuſcujus brevitate
Corporis, inter ſe multum variare Figuræ
Non poſſunt: Fac enim minimis è partibus eſſe
Corpora prima tribus, vel paullo pluribus auge;
Nempe ubi eas parteis unius Corporis omneis,
Summa atque ima locans, tranſmutans dextera lævis,
Omnimodis expertus eris, quam quiſque det ordo
Formaï ſpeciem totius Corporis ejus:
Quod ſupereſt, ſi forte voles variare figuras,
Addendum parteis alias erit: inde ſequetur
Adſimili ratione alias, ut poſtulet ordo,
Si tu forte voles etiam variare figuras.
Ergo formaï novitatem corporis augmen

Subſequitur:

rough Salt, which are more inclined to ſtick as they paſs along, than thoſe Particles that are globular and ſmooth.

Variety of Figures finite.

This being proved, I ſhall here join another Obſervation, which juſtly derives its Credit from what is explained before: That the [x] Seeds of Things vary their Figure not without End, but after a finite Manner. If it were not ſo, ſome Seeds, by an infinite Increaſe of their Parts, would be of an immenſe Size; for in ſo ſmall a Body as an Atom conſiſts of, the Figures have not room to change often among themſelves: Suppoſe, if you will, theſe Atoms or firſt Seeds conſiſt of ſmalleſt Parts, three ſuppoſe, or a few more, if you pleaſe; now, by varying theſe ſeveral Parts of one Atom or Seed into all poſſible Shapes, placing the Uppermoſt below, or turning the Right to the Left, you will find the ſeveral Figures that every Change will give this Seed in all its Parts: But if you would [y] change its Figure ſtill further, you muſt add new Parts to it; and, by the ſame Reaſon, you muſt ſtill add more, if you ſtill think of changing its Figure into more Shapes, ſo that the Body muſt increaſe in proportion as every new Figure appears; and therefore, you

[x] He has proved, that the Atoms vary in their Figure, and in their Bigneſs too; now he aſſerts, that this Variety is not infinite: For to make an infinite Variety of Figures, the Maſs of ſome of the Seeds muſt of neceſſity be immenſely great, ſince an immenſe Magnitude only is capable of an immenſe Variety of Figure; but take an Atom, and turn and tranſpoſe every way the Parts that can be conceived in it, and you will find only a finite Variety of Figures in ſo ſmall a Body.

[y] The Parts of any finite Magnitude may be tranſpoſed ſo many ways, that no new Way ſhall remain to change the Poſition from what it had been in before; otherwiſe there would be ſtill new and new Parts, even to an Infinity; and then the Magnitude might be infinite, which an Atom can never be, it being too little even to be ſeen.

cannot

Subsequitur: quare non est ut credere possis,
Esse infinitis distantia semina formis,
Ne quædam cogas immani maximitate
Esse, suprà quod jam docui, non posse probari.
Jam tibi Barbaricæ vestes, Melibœaque fulgens
Purpura Thessalico concharum tincta colore, &
Aurea Pavonum ridenti imbuta lepore,
Sæcla novo rerum superata colore jacerent:
Et contemptus odor Myrrhæ, Mellisque sapores,
Et Cycnea mele, Phœbæaque dædala chordis
Carmina consimili ratione oppressa silerent.
Namque aliis aliud præstantius exoreretur.
Cedere item retrò possent in deteriores
Omnia sic parteis, ut diximus in meliores:
Namque aliis aliud retrò quoque tertius esset
Naribus, Auribus, atque Oculis, Orisque sapori.
Quæ quoniam non sunt in rebus reddita, certa &
Finis utrinque tenet Summam: Fateare necesse 'st
Materiam quoque finitis differre Figuris.
Denique, ab Ignibus, ad gelidas hiemisque Pruinas
Finitu 'st, retroque pari ratione remensu 'st.
Finit enim Calor, ac Frigus, mediique Tepores

cannot conceive, that the Seeds ſhould be diſtinguiſhed by an infinite Variety of Forms, unleſs you admit that they are likewiſe infinite in Magnitude, which, as I ſaid above, is impoſſible to be proved.

Besides; [z] the embroider'd Veſts of *Aſia*, the bright [a] *Melibœan* Purple, dipt in the Blood of the *Theſſalian* Shell-fiſh, and the golden Brood of Peacocks, gliſtering with their gaudy Plumes, would lie undiſtinguiſhed, being exceeded by other Things of greater Luſtre; and the Smell of Myrrh, and the Taſte of Honey, would be deſpiſed, and the Singing of the Swan, and the nobleſt Verſe ſung to ſweet Muſick would, by the ſame Rule, be outdone, and ceaſe to pleaſe; for ſome other Things might ariſe more agreeable than theſe.

And as ſome Things, we obſerve, may advance into greater Perfection, ſo others likewiſe may decline, and grow worſe; for one Thing may ſucceed another ſtill more diſagreeable to the Noſe, the Ears, the Eyes, and Taſte. But ſince this does not appear in the Nature of Things, ſince there is a certain Boundary to what is *beſt* and *worſt*, we are obliged to own, that Matter is diverſified by Shapes that are finite, and within fixed Bounds.

Lastly, from Fire, to the piercing Cold of Winter, a Point is ſet; and ſo, from Cold to Heat, they are both intenſe: For Heat and Cold are the Extremes, the middle Warmth lies between

[z] If you allow a Variety of Seeds even to Infinity, the outward Qualities of natural Things would never be fixed or determined; they might ſtill be diverſified by a new Figuration, that there might ariſe a Better than the Beſt, and a Worſe than the Worſt.

[a] *Melibœa* was a City of *Theſſaly*, famous for Purple.

both,

Inter utrumque jacent, explentes ordine Summam.
Ergo finita distant ratione creata,
Ancipiti quoniam mucrone utrinque notantur,
Hinc Flammis, illinc rigidis infessa Pruinis.
Quod quoniam docui, pergam connectere rem, quæ
Ex hoc apta fidem ducit: Primordia rerum,
Inter se Simili quæ sunt perfecta figura,
Infinita cluere: etenim distantia cum sit
Formarum finita, necesse 'st, quæ Similes sint,
Esse Infinitas: aut summam Materiaï
Finitam constare: id quod non esse probavi.
Quod quoniam docui, nunc suaviloquis, age, paucis
Versibus ostendam, corpuscula Materiaï
Ex infinito summam rerum usque tenere,
Undique protelo Plagarum continuato.
Namquod rara vides magis esse animalia quædam,
Fœcundamque minùs Naturam cernis in illis;
At regione, locoque alio, terrisque remotis
Multa licet genere esse in eo, numerumque repleri.
Sicuti Quadrupedum cum primis esse videmus
In genere anguimanos Elefantos, India quorum
Millibus è multis vallo munitur eburno,
Ut penitus nequeat penetrari; tanta ferarum
Vis est, quarum nos perpauca exempla videmus.
Sed tamen id quoque uti concedam, quam libet, esto
Unica res quædam nativo corpore Sola,

Cui

both, and thus orderly fills up the Whole. This Warmth therefore is distant equally from both Extremes, and is confined by Bounds on both sides, kept in on this by Heat, on that by smarting Cold.

Seeds of every Shape infinite.

This being proved, [b] I shall here join another Observation, which justly derives its Credit from what is explained before: This is, that the Seeds of Things that are alike, and perfectly of the same Figure, are in Number infinite; for tho' the Variety of their Figures be only finite, yet the Seeds themselves, that are alike in Nature, must needs be infinite; otherwise, the whole of Matter must be finite, which I have fully proved is not.

Thus having cleared the way, I shall now shew, in short but sweetest Numbers, that the Seeds of Matter are infinite, and hold together the whole of Things, by constant Force of Blows, on every side.

For though you observe some Species of Animals are less common, and Nature seems less fruitful in their Production, yet in other Countries, in other Places, and in Lands more remote, you meet with many Creatures of that kind, and more in Number; for you observe the Elephant, Chief of Beasts, wreathing his lith Proboscis like a Snake: How many Thousands of them *India* breeds, which fortify her with a Wall of Ivory impenetrable, not to be forced, tho' we see but few at *Rome*. But grant, if you please, there was only one single Creature of a particular kind in Nature, whose

[b] The different Figures of his Atoms he has proved to be finite, but the Seeds of a like Figure, he contends, are infinite; for if the Atoms contained under each Sort were finite in Number, there could be no Infinity of Atoms in the Universe.

Cui ſimilis toto terrarum non ſit in orbe :
Infinita tamen niſi erit vis Materiaï,
Unde ea progigni poſſit concepta ; creari
Non poterit : neque quod ſupereſt, procreſcere, alique.
Quippe etenim ſumant oculi, finita per Omne
Corpora jactari unius genitalia reii ;
Unde, ubi, qua vi, & quo pacto congreſſa coibunt
Materiæ tanto in pelago, turbaque aliena?
Non (ut opinor) habent rationem conciliandi :
Sed quaſi naufragiis magnis multiſque coortis,
Disjectare ſolet magnum mare tranſtra, guberna,
Antennas, proram, malos, tonſaſque natanteis,
Per terrarum omneis oras fluitantia apluſtra ;
Ut videantur, & indicium mortalibus edant,
Infidi maris inſidias, vireiſque, dolumque
Ut vitare velint, neve ullo tempore credant,
Subdola cum ridet placidi pellacia ponti :
Sic tibi ſi finita ſemel Primordia quædam
Conſtitues, ævum debebunt ſparſa per omne
Disjectare æſtus diverſi Materiaï :
Nunquam in concilium ut poſſint compulſa coïre :
Nec remorari in concilio, nec creſcere adaucta.
Quorum utrumque palam fieri manifeſta docet res,
Et res progigni, & genitas procreſcere poſſe :
Eſſe igitur genere in quovis Primordia rerum
Infinita palam 'ſt, unde omnia ſuppeditantur.

like was not to be found throughout the World, yet unleſs the Seeds of which it was formed were in Number infinite, it could never come into Being, or, when once made, could it increaſe, or be ſupported.

For, fancy you ſee the finite Seeds of any Body toſſed about through the infinite Space, whence, where, by what Force, by what Deſign, could they meet and unite in that wide Ocean of Matter, in that ſtrange Confuſion? They have no Reaſon, I ſuppoſe, to direct them to this Union. But, as in dreadful Wrecks, when many Ships are loſt, the troubled Sea ſcatters abroad the Seats, the Sterns, the Sail-yards, the Prows, the Maſts, the floating Oars, the Flags ſwimming about all the Shores, that they may be ſeen, and forewarn poor Mortals to fly, and at no time to truſt the Treachery, the Power, and the Deceit of that unfaithful Element, even when the perfidious Flattery of her ſmooth Face ſmiles upon them; ſo, if you allow the firſt Seeds of Things to be finite, the various Agitation of Matter muſt for ever toſs them about, ſcatter'd as they are, ſo that they could never be forced to unite; or, if they could, could they preſerve that Union, or admit of any Increaſe? And yet the Nature of Things evidently proves, that Beings are produced, and, when produced, increaſe; and therefore, [c] the Principles of Things, in every kind, 'tis plain, are infinite, and by them all Beings are formed and ſupported.

[c] The Notion of the Infinity of the Atoms is the greateſt Abſurdity; for infinite Atoms muſt fill all the Parts of Space, and can be nothing but a vaſt Heap of dull moveleſs Matter co-extended with it. How then could the World be made? How theſe various Alterations of Bodies, all which proceed from Motion, be produced?

Nec ſuperare queunt motus utique Exitiales
Perpetuò, neque in æternum ſepelire ſalutem;
Nec porro rerum Genitales Auctificique
Motus perpetuò poſſunt ſervare creata.
Sic æquo geritur certamine Principiorum
Ex infinito contractum tempore bellum:
Nunc hinc, nunc illinc ſuperant vitalia rerum,
Et ſuperantur item; miſcetur Funere Vagor,
Quem pueri tollunt viſentes luminis oras:
Nec nox ulla diem, neque noctem aurora ſecuta 'ſt,
Quæ non audierit miſtos Vagitibus ægris
Ploratus, mortis comites, & funeris atri.
Illud in his obſignatum quoque rebus habere
Convenit, & memori mandatum mente tenere:
Nil eſſe, in promptu, quorum natura tenetur,
Quod genere ex uno conſiſtat Principiorum:
Nec quicquam, quod non permiſto Semine conſtet;
Et quàm quicque magis multas vis poſſidet in ſe,
Atque poteſtates, ita pluria Principiorum
In ſeſe genera, ac varias docet eſſe figuras.

Principiò

[d] Nor do those Motions that are fatal and destructive to Beings, always prevail, and cause a Dissolution never to be recover'd; nor, on the contrary, do those Motions by which Beings are formed and increased, always preserve Things when they are produced, but a perpetual War has been for ever carried on, with equal Success, between the Principles of Things; one while the vital Seeds prevail, and now again they are routed, and beaten out of the Field: The Cries of Infant Beings, which they send out as soon as they see the Light, are mingled with the Funeral of others that are departed; nor is there a Night that follows the Day, nor a Morning which succeeds the Night, that does not hear the Groans, the Attendants of Death, and sad Obsequies, mingled with the tender Laments of new-born Babes rising into Being.

'Tis proper likewise, that in this Place you fix it as an established Truth, and impress it deeply upon your Mind [e], that there is no Being to be found in Nature, that consists altogether of Principles of one kind, nor is there any thing that is not made up of mingled Seeds; and the more Powers and Faculties any Being is endued with, the more it appears to be formed of various Sorts of Seeds, that differ in Figure among themselves.

[d] If the Seeds of a like Figure were finite, the Things composed of those finite Seeds, when once dissolv'd, could never be restored, the Generation and Growth of Things would be in vain expected.

[e] The various Qualities of Things proceed from the Variety of the Seeds, which must necessarily likewise produce a Variety of Contexture. His first Argument he brings from the Earth.

Principiò, Tellus habet in se Corpora prima,
Unde Mare immensum volventes flumina fontes
Assiduè renovent: habet, Ignes unde oriantur.
Nam multis succensa locis ardent sola terræ;
Eximiis verò furit ignibus impetus Ætnæ.
Tum porrò nitidas Fruges, Arbustaque læta
Gentibus humanis habet unde extollere possit.
Unde etiam fluidas Frondeis, & Pabula læta
Montivago generi possit præbere ferarum.
Quare magna Deûm mater, materque ferarum,
Et nostri genetrix Hæc dicta 'st Corporis una.
Hanc veteres Graiûm docti cecinere Poëtæ
Sublimem in curru bijugos agitare leones:
Aëris in spatio magnam pendere docentes
Tellurem; neque posse in Terra sistere Terram.
Adjunxere Feras, quia quamvis effera proles
Officiis debet molliri victa parentum.
Muralique caput summum cinxere Corona:
Eximiis munita locis quòd sustinet Urbeis:
Quo nunc insigni per magnus prædita terras
Horrificè fertur divinæ Matris imago.
Hanc variæ gentes antiquo more sacrorum
Idæam vocitant matrem, Phrygiasque catervas
Dant comites, quia primùm ex illis finibus edunt
Per terrarum orbem Fruges cœpisse creari.
Gallos attribuunt, quia numen qui violarint
Matris, & ingrati Genitoribus inventi sint,

Significare

AND firſt, the Earth contains within herſelf firſt Principles, from whence the Fountains, flowing with their Streams, do conſtantly ſupply the mighty Sea: She holds likewiſe within her Womb the Seeds of Fire; we ſee in many Places how ſhe burns, how *Ætna* rages with diſtinguiſhed Flames. She likewiſe has the Seeds from whence ſhe forms ſweet Fruits, and pleaſant Trees, for Men; from whence ſhe does afford the tender Shrubs and verdant Graſs to ſavage Beaſts that wander on the Hills.

THEREFORE, this Earth alone is called [f] great *Mother* of the Gods, Parent of Beaſts, and of the human Race. Of her the learned *Grecian* Bards of old have feigned, that in her Chariot, as ſhe rides aloft, ſhe drives a Pair of Lions harneſſed; to teach, that in the ſpacious Air hangs the vaſt Maſs of Earth, without a lower Earth to prop it up. Theſe Beaſts they yoked, to ſhew that Youth, altho' by Nature wild, yet, ſoftned by the Parents tender Care, grows tame. Her Head they compaſs with a Mural Crown, becauſe, in Places ſtrongly fortified, ſhe bears up Cities; and in this Pomp adorned, the Image of this ſacred Mother is born with dread Solemnity through all the World. Her, after the ancient Uſe of holy Rites, the different Nations call Mother of Mount *Ida*, and give her for Attendants a Train of *Phrygian* Dames, becauſe in *Phrygia* Corn was firſt raiſed, and thence was ſcatter'd over all the Earth. They ſerve her by Eunuch Prieſts, to ſhew, that thoſe who violate the ſacred Character of their Mother, or are found undutiful to their Parents from whence they ſprung, ſhould

[f] He takes occaſion to explain the Ceremonies obſerved in the Myſteries of *Cybele*, Mother of Gods, which are to be met with in every Dictionary.

Significare volunt indignos esse putandos,
Vivam progeniem qui in oras luminis edant.
Tympana tenta tonant palmis, & Cymbala circum
Concava, raucisonoque minantur Cornua cantu;
Et Phrygio stimulat numero cava Tibia mentes,
Telaque præportant violenti signa furoris,
Ingratos animos, atque impia pectora volgi
Conterrere metu quæ possint numine Divæ.
Ergo cùm primùm magnas invecta per urbeis
Munificat tacita Mortaleis muta salute:
Ære atque Argento sternunt iter omne viarum
Largifica stipe ditantes, ninguntque rosarum
Floribus, umbrantes Matrem, comitumque catervas.
Hîc armata manus (Curetas nomine Graii
Quos memorant Phrygios) inter se forte catenas
Ludunt, in numerumque exsultant sanguine læti; &
Terrificas capitum quatientes numine cristas,
Dictæos referunt Curetas: Qui Jovis illum
Vagitum in Creta quondam occultâsse feruntur,
Cum pueri circum puerum pernice chorea
Armati in numerum pulsarent æribus æra,
Ne Saturnus eum malis mandaret adeptus,
Æternumque daret Matri sub pectore volnus;

Propterea

be thought unworthy to raiſe a living Offspring to ſucceed them. With their Hands they beat loudly upon Drums well-braced; the hollow Cymbals all about, and Horns with their hoarſe Noiſe, threaten dreadfully around her, [g] the Pipe, with *Phrygian* Airs, mads their very Souls; and they carry Arms, the Signs of their diſtracted Rage, to terrify the ſtubborn Minds and impious Hearts of the Vulgar, with a Fear and Reverence of this great Deity.

When therefore ſhe is carried in Proceſſion, through the great Towns, and, dumb as ſhe is, ſilently beſtows [h] Health upon her Votaries, they ſcatter Braſs and Silver in all the Way ſhe paſſes, enriching her with profuſe Oblations; they ſhower down the Flowers of Roſes, and ſo cover the great Mother, and the whole Train of her Attendants. Her an armed Troop (the *Greeks* call them the *Phrygian Curetes*) leap about, with a Chain through their Hands, and wanton in the Blood they have drawn, dance to exact Time, and, full of the Goddeſs, ſhake their dreadful Creſts upon their Heads. They repreſent the *Dictæan Curetes*, who are ſaid formerly to have drowned the Infant-cries of *Jupiter* in *Crete*; when the young Prieſts, all armed, ſtruck their brazen Bucklers together, as they danced nimbly round the Boy, leſt *Saturn* ſhould ſeize upon him, and devour him, and, by that means, wound his Mother to the Heart, with a Grief never to be

[g] The *Phrygian* Muſick was a ſort of Enthuſiaſtick Harmony that raiſed the Paſſions of the Mind, and ſwelled the Soul to Rage and Fury.

[h] This is a ſharp Invective of the Poet's; a rough unpoliſhed Stone, not given to tattle, muſt needs do a world of Good: She never ſaid a word of the Benefits ſhe beſtowed.

Propterea Magnam armati Matrem comitantur :
Aut quia significant Divam prædicere, ut armis,
Ac virtute velint Patriam defendere terram :
Præsidioque parent, decorique Parentibus esse.
Quæ benè, & eximiè quamvis dispôsta ferantur,
Longè sunt tamen à vera ratione repulsa.
Omnis enim per se Divûm natura necesse 'st
Immortali ævo summa cum pace fruatur,
Semota à nostris rebus, sejunctaque longè.
Nam privata dolore omni, privata periclis,
Ipsa suis pollens opibus, nihil indiga nostri,
Nec bene promeritis capitur, nec tangitur ira.
Terra quidem vero caret omni tempore Sensu :
Sed quia multarum potitur Primordia rerum,
Multa modis multis effert in lumina solis.
Hic si quis Mare Neptunum, Cereremque vocare
Constituet Fruges, & Bacchi nomine abuti
Mavolt, quam Laticis proprium proferre vocamen :
Concedamus ut hic terrarum dictitet Orbem
Esse Deûm Matrem, dum re non sit tamen apse.
Sæpe itaque ex uno tondentes gramina campo
Laniger æ pecudes & equorum duellica proles,
Buceriæque greges sub eodem tegmine cæli,
Ex unoque sitim sedantes flumine aquaï,
Dissimili vivunt specie, retinentque parentum
Naturam, & mores generatim quæque imitantur :

forgotten: For this Reaſon, an armed Train accompany the great Mother; or elſe the Goddeſs ſignifies, that they ſhould preſerve their native Country by their Arms and Valour, and be a Protection and Honour to their Parents.

Such Fancies, tho' well and wittily contrived, yet are far removed from Truth and right Reaſon; for the whole Nature of the Gods muſt ſpend an Immortality in ſofteſt Peace, removed from our Affairs, and ſeparated by Diſtance infinite; from Sorrow free, ſecure from Danger, in its own Happineſs ſufficient, and nought of our's can want; is neither pleaſed with Good, nor vexed with Ill.

The Earth is indeed at all times void of real Senſe; but as it contains within itſelf the firſt Seeds of many Things, it produces them into Being after various Manners; ſo, if any one here reſolves to call the Sea by the Name of *Neptune*, and Corn by the Title of *Ceres*, and chuſes rather to abuſe the Name of *Bacchus*, than to ſpeak the proper Appellation of Wine, ſuch a one, we allow, may ſtyle this Globe of Earth the Mother of the Gods, when really ſhe is no ſuch thing.

[i] But to return; we ſee the woolly Sheep, the warlike Breed of Horſes, and horned Bulls, living under the ſame Covert of the Sky, grazing together in the ſame Field, and quenching their Thirſt in the ſame Stream of Water; yet they are each of a different Species, and retain the Nature of their Sires, and every Kind imitates the Diſpoſitions of the Race from whence they came; ſo different

[i] Since ſo many Sorts of Animals are fed by the ſame Herbs, and drink of the ſame Water, the Herbs and Water muſt contain ſeveral Sorts of Principles, to make them proper Nouriſhment for each ſort.

is

Tanta 'ſt in quovis genere Herbæ Materiaï
Diſſimilis ratio: tanta 'ſt in Flumine quoque.
Jam verò quamvis animantem ex omnibus unam
Oſſa, Cruor, Venæ, Calor, Humor, Viſcera, Nervi
Conſtituunt, quæ ſunt porro diſtantia longè
Diſſimili perfecta figura Principiorum.
Tum porro quæcunque Igni flammata cremantur;
Si nil præterea, tamen ex ſe ea corpora tradunt,
Unde Ignem jacere, & Lumen ſummittere poſſunt:
Scintillaſque agere, ac latè differre Favillam.
Cætera conſimili mentis ratione peragrans,
Invenies intus multarum Semina rerum
Corpore celare, & varias cohibere Figuras.
Denique multa vides, quibus eſt Odor, & Sapor una
Reddita ſunt cum Odore; imprimis pleraque dona,
Relligione animum turpi cum tangere parto.
Hæc igitur variis debent conſtare Figuris:
Nidor enim penetrat, qua Succus non it in artus:
Succus item ſeorſum, & rerum Sapor inſinuatur
Senſibus, ut noſcas primis differre figuris.
Diſſimiles igitur Formæ glomeramen in unum
Conveniunt: Et res permiſto Semine conſtant.
Quin etiam paſſim noſtris in verſibus ipſis
Multa Elementa vides multis communia verbis;
Cùm tamen inter ſe Verſus, ac Verba neceſſe 'ſt
Confiteare alia ex aliis conſtare Elementis:

Non

is the Nature of the Seeds in every Herb, ſo various are the Principles of the Water in every Stream.

Now tho' Blood, Bones, Veins, Heat, Moiſture, Bowels, Nerves, go to the Formation of every Animal; yet of what Variety of Figures, widely different in themſelves, do their Seeds conſiſt?

And then [k] all Bodies that are combuſtible, and burnt by Fire, if they agree in nothing elſe, yet diſcharge from themſelves ſuch Parts, by which they ſpread about their Flame and Light; from whence they raiſe Sparkles, and ſcatter their Embers all abroad. So if you examine other things by the ſame Rule, you will find Seeds of different kind lie concealed in all Bodies within, and ſhew themſelves of a different Figure.

Lastly, you obſerve many Things that emit both Smell and Taſte, eſpecially thoſe Victims you offer when your Mind is religiouſly moved for ſomething you have unjuſtly acquired. Theſe Senſations, therefore, muſt be raiſed by Seeds of different Figure; for Smell pierces through Pores where Taſte can find no Paſſage: The Juice likewiſe, and the Taſte of Things, affect the Senſe by proper Organs, to convince that their Seeds vary in their Figure. Principles therefore of various Shape, make up every particular Maſs, and Things in general are compoſed of mingled Seeds; for, in theſe Verſes of mine, you may all along obſerve, that many Letters are common to many Words, and yet you muſt confeſs, that ſome Verſes and ſome Words conſiſt of very different Letters; not becauſe the Number of Let-

[k] All combuſtible Matter is reſolved into Fire, Light, Smoke, and Aſhes; and we may believe, that the Diſſolution is not made into any Thing, but what was actually contained in the Thing diſſolv'd: And therefore, in combuſtible Things, here lie hid thoſe different Kinds of Seeds, of which Fire, Light, Smoke, and Aſhes conſiſt.

ters

Non quòd multa parum communis Littera currat,
Aut nulla inter se duo sint ex omnibus isdem:
Sed quia non volgò paria omnibus omnia constant.
Sic aliis in rebus item communia multa,
Multarum rerum cum sint Primordia longè
Dissimili tamen inter se consistere summa
Possunt: ut meritò ex aliis constare ferantur
Humanum genus, ac Fruges, Arbustaque læta.
Nec tamen omnimodis connecti posse putandu 'st
Omnia: nam volgò fieri Portenta videres,
Semiferas Hominum species existere; & altos
Interdum Ramos egigni corpore vivo:
Multaque connecti Terrestria membra Marinis.
Tum flammam tetro spiranteis ore Chimæras
Pascere Naturam per terras omniparenteis.
Quorum nil fieri manifestu 'st: omnia quando
Seminibus certis certa genetrice creata
Conservare genus crescentia posse videmus.
Scilicet id certa fieri ratione necesse 'st;
Nam sua cuique Cibis ex omnibus intus in artus
Corpora discedunt: Connexaque convenienteis
Efficiunt motus: At contra aliena videmus
Rejicere in terras Naturam: Multaque cæcis
Corporibus fugiunt è corpore percita plagis,
Quæ neque connecti cuiquam potuere, neque intra

Vitaleis

ters are few, or no two Words are formed of the ſame Letters, but becauſe every Verſe and every Word is compoſed of Letters altogether different. So, tho' the ſame Principles are common to many Things, yet the Things may remain very different among themſelves; and it may properly enough be ſaid, that Men, and Fruits, and pleaſant Trees are made up of different Seeds.

Yet we are not to ſuppoſe, that [1] All Seeds of whatever Figure, do mutually unite to the Production of Beings; for then you would obſerve Monſters ſpringing up every day, Creatures half Man, half Horſe, the lofty Boughs of Trees growing out of a living Body, and the Limbs of Land-Animals joined to the Bodies of Fiſh, and Nature forming every where out of the Earth (the Mother of all Things) Chimæras from their dreadful Mouths breathing out Flames; but 'tis plain, nothing of this happens, ſince we ſee all Things are formed from certain Seeds, and regular Principles, and preſerve their Kind as they grow up and increaſe.

Nor indeed can it, by the fixed Rules of Reaſon, be otherwiſe; for, out of the ſeveral Sorts of Food, the Particles of that which is proper to every Animal, deſcend into the Limbs, and there united, produce the Motions ſuitable to that Animal; but, on the contrary, thoſe Particles of Food that are deſtructive, ſome of them, we find, Nature throws off through open Paſſages, others are, inſenſibly to us, forced out of the Body through the Pores, ſuch as would admit of no

[1] Tho' many Seeds are common to many Things, yet each Thing requires a certain Order and Diſpoſition of Union, and Aſſociation of the Seeds that compoſe it; and when the Thing is diſſolved, the congruous Atoms mutually withdraw from the incongruous.

Vitaleis motus consentire, atque animari.
Sed ne fortè putes animalia sola teneri
Legibus his: Eadem ratio res terminat omneis.
Nam veluti tota natura dissimiles sunt
Inter se genitæ res quæque, ita quamque necesse 'st
Dissimili constare figura Principiorum;
Non quòd multa parum simili sint prædita forma:
Sed quia non volgò paria omnibus omnia constent.
Semina cùm porro distent, differre necesse 'st
Intervalla, Vias, Connexus, Pondera, Plagas,
Concursus, Motus: quæ non Animalia solùm
Corpora sejungunt, sed Terras, ac Mare totum
Secernunt, Cœlumque à Terris omne retentant.
Nunc age, dicta meo dulci quæsita labore
Percipe: ne fortè hæc Albis ex Alba rearis
Principiis esse, ante oculos quæ Candida cernis:
Aut ea, quæ Nigrant, Nigro de Semine nata:
Neve alium quemvis quæ sunt induta colorem,
Propterea gerere hunc credas, quòd Materiaï
Corpora consimili sint ejus tincta colore.
Nullus enim Color est omnino Materiaï
Corporibus, neque par rebus, neque denique dispar.
In quæ corpora si nullus tibi fortè videtur
Posse animi injectus fieri, procul avius erras:
Nam cum Cæcigeni, Solis qui lumina nunquam

Union with others, nor agree to promote the vital Motions and Purposes of Life.

But lest you should think, that living Creatures only are bound by these Laws, the same Reason holds with regard to all other Beings; for as all Bodies are in their Nature different in themselves, so it is necessary that each should consist of Principles of a different Figure, not but that many Seeds are the same in Shape, but they do not all agree in Form perfectly alike.

Since then the Seeds differ, it is necessary that their Intervals, their Courses, Connexions, Weights, Strokes, Concussions, Motions, should differ likewise; Properties, that not only make a Distinction between Animals, but divide the Earth and the Sea, and preserve the Heavens separate from the Earth, and secure all Things from being confusedly mingled together.

Now, come on, attend to Rules which I have found, by a Labour very delightful to my self; lest you should think those Bodies that appear white to your Eyes, are composed of white Seeds, or such as shew black, are formed of black; or what Colour soever a Thing wears, you should conclude the Cause of it to be, that the Seeds of which it is made are strained with the same Colour: For the Principles of Matter are [m] void of all Colour, both like or unlike what appears upon the Bodies they produce.

If you should chance to think, that the Mind cannot possibly form an Idea of Seeds without Colour, you are under a strange Mistake; for Persons born blind, who never saw the Light of

[m] He means, that the Atoms have no Colour whatever, like or unlike those that we discover on the Surface of concrete Bodies.

the

Aſpexere, tamen cognoſcant corpora Tactu,
Ex ineunte ævo nullo contincta colore:
Scire licet menti quoque noſtræ Corpora poſſe
Verti in notitiam nullo circumlita fuco.
Denique nos ipſi cæcis quæcunque tenebris
Tangimus, haud ullo ſentimus tincta Colore.
Quod quoniam vinco fieri, nunc eſſe docebo.
Omnis enim Color omnino mutatur in omneis:
Quod facere haud ullo debent Primordia pacto,
Immutabile enim quiddam ſuperare neceſſe 'ſt;
Ne res ad Nihilum redigantur funditùs omnes.
Nam quodcunque ſuis mutatum finibus exit,
Continuò hoc mors eſt illius, quod fuit antè.
Proinde Colore cave contingas Semina rerum:
Ne tibi res redeant ad Nilum funditùs omnes.
Præterea, ſi nulla Coloris Principiis eſt
Reddita natura, at variis ſunt prædita Formis;
E quibus omnigenos gignunt variantque Colores.
(Præterea magni quòd refert Semina quæque
Cum quibus & quali poſitura contineantur,
Et quos inter ſe dent motus, accipiantque:)
Perfacilè extemplò rationem reddere poſſis,
Cur ea, quæ Nigro fuerint paullo ante Colore,

Marmoreo

the Sun, yet discover Bodies by the Touch, as if they had no manner of Colour belonging to them. So that Seeds imbued with no Colour, can offer themselves to our Mind, and be conceived by us. And besides, the Things we touch in the dark Night, we distinguish without any regard to the Colour they may otherwise appear in.

That Seeds *may* be void of Colour I have shewed; I shall now prove that they actually *are* so. [n] Now every Colour may be changed one into another; but the Principles of Things will by no means admit of Change, there necessarily must be something that remains immutable, lest all Things should be utterly reduced to Nothing; for whatsoever is changed, and breaks the Bounds of its first Nature, instantly dies, and is no more what first it was. Be cautious therefore, how you stain the Seeds of Things with Colour, lest all Things should recur to Nothing, and be utterly destroyed.

Besides, tho' Nature bestows no Colour upon Seeds, [o] yet they are endued with different Figures, from whence they form and vary the Colours of every kind which shew upon them. (For it is of great Concern what Seeds unite with others, in what Position they are preserved, and what Motions they give and receive among themselves;) and thus you may readily account, why Things that just before appeared black, should

[n] All Colour is liable to Change, but the Seeds of Things are immutable, otherwise all Things would fall into Nothing. If Colour were intrinsically in the Seeds, the Seeds would be mutable; for all Colour is mutable.

[o] There is no Necessity that the Seeds should be imbued with Colours; for allow them a Variety of Figures, and, from the different Order, Site, and Disposition of them, Colours will proceed.

Marmoreo fieri possint Candore repente:
Ut Mare, cùm magni commôrunt Æquora venti,
Vertitur in canos candenti marmore fluctus.
Dicere enim possis Nigrum, quod sæpe videmus,
Materies ubi permista 'st illius, & ordo
Principiis mutatus, & addita, demptaque quædam,
Continuò id fieri ut Candens videatur, & Album:
Quòd si Cæruleis constarent Æquora ponti
Seminibus, nullo possint Albescere pacto.
Nam quocunque modo perturbes, Cærula quæ sint
Nunquam in Marmoreum possunt migrare Colorem.
Sin alio, atque alio sunt Semina tincta colore,
Quæ Maris efficiunt unum purumque Nitorem:
Ut sæpe ex aliis Formis, variisque Figuris
Efficitur quiddam Quadratum, unæque figuræ:
Conveniebat, uti in Quadrato cernimus esse
Dissimileis formas; ita cernere in Æquore ponti
Aut alio in quovis uno puroque Nitore,
Dissimileis longè inter se, varioque colores.
Præterea, nihil officiunt, obstantque Figuræ
Dissimiles, quo Quadratum minùs omne sit extra:
At varii rerum impediunt, prohibentque Colores,
Quo minùs esse uno possit res tota Nitore.
Tum porro, quæ ducit & inlicit, ut tribuamus
Principiis rerum nonnunquam, causa, Colores,
Occidit, ex Albis quoniam non Alba creantur:

ſuddenly look white. As the Sea, when the rough Winds enrage the Waters, grows white with foaming Waves. So you may ſay of what commonly appears black to us, when the Seeds of which it is formed are mingled, and their Order changed, when ſome new Seeds are added, and ſome old ones are removed, the direct Conſequence is, that its Colour is changed, and appears white. But if the Water of the Sea conſiſted eſſentially of blue Particles, it could by no means change into a white Colour; diſturb the Order of the Seeds how you would, the Principles that are blue could never paſs into a white.

BUT if you ſay, that the Seeds which make the Sea look of one uniform White, are ſtained with different Colours, as a perfect Square that is of one Figure, is made up of ſeveral Bodies that are of ſeveral Figures, then it would follow, that as we perfectly ſee the diſſimilar Figures which the Square contains within it, ſo we might diſcover in the Water of the Sea, or in any other Body of one ſimple Colour, the mixt and different Colours from which that ſimple Colour proceeds.

[p] BESIDES, the diſſimilar Figures that go to make up a Square, do by no means hinder, that the Surface of the Body ſhould appear ſquare; but a mixt Variety of Colours will for ever prevent, that the Surface of any Body ſhould appear of one fixed and uniform Colour.

AND then, the very Reaſon that would incline us ſometimes to impute Colours to Seeds, is by this means deſtroyed; for, in this Caſe, white

[p] Bodies of a different Figure may unite into another different Figure, as Triangles into a Square; but the ſame cannot be ſaid of Colours, for different Colours can never compoſe one ſimple Colour.

Nec quæ Nigra cluent, de Nigris: sed Variis de.
Quippe etenim multo procliviùs exorientur
Candida de nullo, quam de Nigrante colore;
Aut alio quovis qui contrà pugnet, & obstet.
Præterea, quoniam nequeunt sine Luce Colores
Esse, neque in Lucem existunt Primordia rerum:
Scire licet quàm sint nullo velata Colore.
Qualis enim cæcis poterit Color esse tenebris,
Lumine qui mutatur in ipso, propterea quòd
Recta aut obliqua percussus Luce refulget?
Pluma Columbarum quo pacto in Sole videtur:
Quæ sita cervices circum, collumque coronat:
Namque aliàs fit uti rubro sit clara Pyropo:
Interdum quodam sensu fit, uti videatur
Inter Cæruleum virideis miscere Smaragdos.
Caudaque Pavonis, larga cum Luce repleta 'st,
Consimili mutat ratione obversa Colores.
Qui, quoniam quodam gignuntur Luminis ictu,
Scilicet id sine eo fieri non posse putandu 'st.
Et quoniam plagæ quoddam genus excipit in se
Pupula, cùm sentire Colorem dicitur Album,

Atque

Bodies are not produced from white, nor black from black, but from Seeds of various Colours. Now a White would much ſooner proceed from Seeds of no Colour at all, than from ſuch as are black, or any other oppoſite Colour whatſoever.

Besides, [q] ſince Colours cannot appear without Light, and ſince the Seeds of Things cannot appear in the Light, you may thence conclude, that they are cover'd with no Colours at all; for how can any Colour ſhew it ſelf in the dark, which ſurround in the Light itſelf, as it is differently ſtruck either with a direct or oblique Ray of Light? After this manner the Plumes of Doves, which grow about their Neck, and are an Ornament to it, ſhew themſelves in the Sun. In one Poſition they appear red like a fiery Carbuncle; in another Light, the Greenneſs of the Emerald is mingled with a Sky-blue. So likewiſe the Tail of the Peacock, all filled with Light, changes its Colours, as the Rays ſtrike directly or obliquely upon it. Since therefore Colours are produced only by the Strokes of Light, we cannot ſuppoſe they can poſſibly exiſt without it.

[r] And ſince the Eye receives within it ſelf one Sort of Stroke when it is ſaid to perceive a white

[q] Colour is nothing but Light, reflected from the Surface of an opacous Body; and therefore in dark Places, where no Rays of Light enter, and out of which none are reflected, there is no ſuch Thing as Colours: And therefore the Colours which appear in Things when the Light returns, are produced from the Light itſelf, according to the Diſpoſitions the Things have to receive, reflect, refract, and convey it to the Eyes.

[r] There is no Occaſion for the Seeds to have any Colours; for allow that they are of different Figures, and diſpoſed in different Manners; and from thence will ariſe various Images, by which they will variouſly ſtrike the Eyes, and ſtir up different Motions in the Organs.

Atque aliud porro, Nigrum cùm, & cætera, ſentit,
Nec refert ea, quæ tangis, quo fortè Colore
Prædita ſint, verùm quali magis apta Figura:
Scire licet, nil Principiis opus eſſe Colores:
Sed variis Formis varianteis edere tactus.

Præterea, quoniam non certis certa figuris
Eſt natura Coloris, & omnia Principiorum
Formamenta queunt in quovis eſſe Nitore:
Cur ea, quæ conſtant ex illis, non pariter ſunt
Omnigenis perfuſa Coloribus in genere omni?
Conveniebat enim Corvos quoque ſæpe volanteis
Ex albis album pennis jactare colorem,
Et nigros fieri nigro de ſemine Cycnos,
Aut alio quovis uno, varioque colore.

Quinetiam quantò in parteis res quæque minutas
Diſtrahitur magis, hoc magis eſt ut cernere poſſis
Evaneſcere paullatim, ſtinguique Colorem:
Ut fit ubi in parvas parteis diſcerpitur Aurum,
Purpura, Pæniceuſque color clariſſimu' multo,
Filatim cùm diſtractus diſperditur omnis:
Noſcre ut hinc poſſis, priùs omnem efflare Colorem
Particulas, quàm diſcedant ad Semina rerum.

Poſtremo quoniam non omnia Corpora vocem
Mittere concedis, neque Odorem: propterea fit,

Colour, and another contrary one, when it views an Object of a black or any other Colour; and since it is of no moment, by what Colour any thing you touch is distinguished, but rather of what peculiar Shape and Figure it is, you may conclude, there is no manner of Occasion that Seeds should be stained with any Colours, but that they should cause that Variety of Touch, by the various Figures with which they are indued.

Besides, since there are no certain Colours peculiar to certain Figures, and since Seeds of any Figure may be of any Colour, whence is it that Bodies that consist of such Seeds, are not in their several kinds imbued with all sorts of Colours? It would be common to see Crows, as they fly about, cast a white Colour from their white Feathers, and black Swans might be produced from black Seeds, or be of any other one or more Colours, as their Seeds chance to be distinguished.

Further, the more any Body is broken into small Parts, the more you may perceive its Colour languishes by degrees, and dies away; this is the Case of Gold, when it is divided into thin Shavings, its Lustre is extinguished, and the Purple Dye, by much the richest, when it is drawn out Thread by Thread, is quite lost; hence you may infer, that the Particles of Bodies discharge themselves of all Colour, before they come to be as small as Seeds.

Again, [s] since you allow that all Bodies do not emit Sound and Smell, and therefore you do

[s] The Senses, he says, are the sole Judges of the Qualities of Things; and therefore, since we allow there are Bodies, which the Nostrils cannot smell, and that those which the Ear cannot hear have no Sound, why should not we allow that Bodies, which the Eyes cannot perceive, have no Colours?

Ut non omnibus attribuas Sonitus, & Odores:
Sic, Oculis quoniam non omnia cernere quimus,
Scire licet, quædam tam constare orba Colore,
Quàm sine Odore ullo quædam, Sonituque remota:
Nec minùs hæc animum cognoscere posse sagacem,
Quàm quæ sunt aliis rebus privata, notisque.
Sed ne forte putes solo spoliata Colore
Corpora prima manere: Etiam secreta Teporis
Sunt, ac Frigoris omnino, calidique Vaporis:
Et sonitu sterila, & Succo jejuna feruntur:
Nec jaciunt ullum proprio de corpore Odorem.
Sicut Amaracini blandum, Stactæque liquorem,
Et Nardi florum, nectar qui naribus halant,
Cum facere instituas: cumprimis quærere par est,
Quoad licet, ac potis es reperire, inolentis Olivi
Naturam, nullam quæ mittat Naribus auram:
Quàm minimè ut possit mistos in corpore Odores,
Concoctosque, suo contactos perdere viro.
Propterea demum debent Primordia rerum
Non adhibere suum gignundis rebus Odorem,
Nec Sonitum, quoniam nihil ab se mittere possunt:
Ne simili ratione Saporem denique quemquam,
Nec Frigus, neque item calidum, tepidumque Vaporem, &
Cætera, quæ cùm ita sunt tandem, ut mortalia constent,
Molli Lenta, Fragosa Putri, Cava corpore raro,
Omnia sunt à Principiis sejuncta necesse 'st,
Immortalia si volumus subjungere rebus

Fundamenta,

not attribute Sound and Smell to every Body; ſo, ſince we cannot diſcover every thing by our Eyes, you may conclude, there are ſome Bodies as much void of Colour, as there are others without Smell or Sound; and a judicious Mind can as properly form a Notion of ſuch Bodies void of Colour, as it can of others that are without Smell or Sound, or any other Qualities whatſoever.

Seeds have no Qualities.

But leſt you ſhould conceive the firſt Seeds are void only of Colour, you muſt know [t] that they are without Warmth, are altogether free from Cold or Heat, they emit no Sound, are without Moiſture, nor do they ſend out any Smell from their ſeveral Bodies; ſo when you propoſe to compound a pleaſant Ointment of ſweet Marjoram, Myrrh, and Flowers of Spikenard, that ſend out the richeſt Odour to the Noſe, the firſt thing you are to do is to chuſe, as far as lies in your power, an Oil that has no Smell, that it may, as little as poſſible, infect and corrupt thoſe ſweet Ingredients, being mix'd and digeſted with them, with its native Rankneſs.

Lastly, the Seeds do not beſtow any Smell upon the Bodies they produce, nor any Sound, for they can exhale nothing from themſelves; and, for the ſame Reaſon, they can communicate no Taſte, nor Cold, nor any Vapour hot or warm. You muſt ſeparate all Qualities from the Seeds, that render them liable to Diſſolution, ſuch as viſcous, brittle, hollow, which proceed from Qualities that are ſoft, putrid, and rare, the Seeds muſt have nothing of theſe Properties if you would fix them upon an eternal Foundation, upon which alone depends the Security of

[t] His Atoms are not only void of Colour, but of all other Qualities, as Smell, Cold, Heat, *&c.* and this is proved to be true by modern Experiments.

Beings,

Fundamenta, quibus nitatur ſumma ſalutis :
Ne tibi res redeant ad Nilum funditùs omnes.
Nunc ea, quæ Sentire videmus cunque neceſſe 'ſt
Ex Inſenſilibus tamen omnia confiteare
Principiis conſtare : neque id manifeſta refutant,
Nec contrà pugnant, in promptu cognita quæ ſunt :
Sed magis ipſa manu ducunt, & credere cogunt,
Ex Inſenſilibus, quod dico, Animalia gigni.
Quippe videre licet, vivos exiſtere Vermeis
Stercore de tetro, putrorem cum ſibi nacta 'ſt
Intempeſtivis ex imbribus humida tellus :
Præterea cunctas itidem res vertere ſeſe.
Vertunt ſe Fluvii, Frondes, & Pabula læta
In Pecudes : vertunt Pecudes in Corpora noſtra
Naturam, & noſtro de Corpore ſæpe Ferarum
Augeſcunt vires, & corpora Pennipotentum.
Ergo omneis natura cibos in corpora viva
Vertit, & hinc Senſus animantum procreat omneis :
Non alia longè ratione, atque arida ligna
Explicat in flammas, & in igneis omnia verſat.
Jamne vides igitur, magni Primordia rerum
Referre in quali ſint ordine quæque locata,
Et commiſta quibus dent motus, accipiantque ?
Tum porrò quid id eſt, animum quod percutit ipſum ?
Quod movet ? & varios ſenſus expromere cogit,
Ex Inſenſilibus, ne credas Senſile gigni ?

Nimirum

Beings, leſt all Things ſhould fall to Nothing, and periſh beyond Recovery.

Now farther, [u] thoſe Beings we ſee indued with Senſe, you muſt needs own are produced from inſenſible Seeds; nor is there any thing we perceive by common Experience, which refutes or oppoſes this Opinion. Every thing rather leads us on, and compels us to believe that Animals, I ſay, proceed from Principles that are void of Senſe; for we obſerve living Worms come into Being from ſtinking Dung, when the Earth, moiſtned by unſeaſonable Showers, grows putrid and rotten. *Senſible from Seeds void of Senſe.*

Besides, Beings of all kinds undergo continual Changes; the Waters, the Leaves, and the ſweet Graſs turn themſelves into Beaſts; the Beaſts convert their Nature into Human Bodies; and the Bodies of wild Beaſts and Birds increaſe and grow ſtrong by theſe Bodies of our's. Nature therefore changes all Sorts of Food into living Bodies; and hence ſhe forms the Senſes of all Creatures, much after the ſame manner as ſhe quickens dry Wood into Fire, and ſets every thing in a blaze. You ſee now it is of the utmoſt Importance, in what Order theſe firſt Seeds are ranged, and, when mingled together, what Motions they give, and receive among themſelves.

But tell me, what is it that lays a Force upon your Mind? What moves you? What drives you into another Opinion, that you ſhould not believe a Thing ſenſible can be formed from inſenſible Seeds? Perhaps you obſerve that Stones,

[u] He undertakes to prove, that Things of Senſe can ſpring from ſenſeleſs Seeds, and that there is no Seed of any ſuperiour Principle to Matter, but a fit Combination of Atoms can *Think, Will,* and *Remember*. Philoſophical Nonſenſe!

Nimirum, Lapides, & Ligna, & Terra quòd una
Mista, tamen nequeunt vitalem reddere Sensum.
Illud in his igitur fœdus meminisse decebit,
Non ex omnibus omnino, quæcùnque creant res,
Sensilia extemplo, & Sensus me dicere gigni:
Sed magni referre, ea primum quantula constent,
Sensile quæ faciunt, & qua sint prædita Forma,
Motibus, Ordinibus, Posituris denique quæ sint:
Quarum nil rerum in Lignis, Glebisque videmus.
Et tamen hæc cùm sunt quasi putrefacta per imbreis,
Vermiculos pariunt, quia Corpora materiaï
Antiquis ex Ordinibus permota nova re,
Conciliantur ita, ut debent Animalia gigni.
Deinde ex Sensilibus cum Sensile posse creari
Constituunt, porro ex aliis sentire suëtis;
Mollia tum faciunt: nam Sensus jungitur omnis
Visceribus, Nervis, Venis, quæcunque videmus
Mollia mortali consistere corpore creta.
Sed tamen esto jam posse hæc Æterna manere:
Nempe tamen debent aut Sensum partis habere,

Aut

and Wood, and Earth, when mingled together, can produce no Creature indued with Senſe; [x] but you will do well to remember, upon this Occaſion, that I did not ſay Things ſenſible, or Senſe, could inſtantly proceed from all Seeds in general, which go to the Production of Beings, but that it was of great Conſequence, of what Size the Seeds are that create a Being of Senſe, with what Figures, Motions, Order, and Poſition they are diſtinguiſhed; Nothing of which we obſerve in Wood, or Clods of Earth: Yet theſe, when they are made rotten by Moiſture, produce Worms, becauſe the Particles of Matter being changed from their former Courſe by ſome new Cauſe, are ſo united and diſpoſed, that living Creatures are formed, and creep into Being.

Besides, thoſe who contend that a ſenſible Being may be raiſed from ſenſible Seeds, (and this you are taught by ſome Philoſophers) muſt needs allow thoſe Seeds to be ſoft; for all Senſe is joined to Bowels, Nerves, and Veins, all which, we know, are ſoft, and conſequently liable to Change and Diſſolution.

[y] But grant their Seeds to be eternal, yet if they are ſenſible, each Seed muſt be indued with Senſe, either as a Part or a whole, and be like a

[x] He confeſſes, that inſenſible Things, unleſs they have a certain Figure and Magnitude, and are agitated in a due Motion, and diſpoſed in a certain Order, never compoſe ſenſible Things; but let all Things neceſſary and requiſite be allowed them, and then an Animal may be produced from the moſt inſenſible of all Things.

[y] Let us ſuppoſe theſe ſenſible, as *Plato* and *Anaxagoras* will have them to be, and ſoft Principles of Things to be eternal, and not ſubject to Diſſolution, yet they cannot be ſaid to be ſenſible as Parts, becauſe ſeparated Parts have no Senſe; nor as Wholes, becauſe they then would be a certain Kind of Animals, and therefore mortal and corruptible.

complete

Aut similia totis Animalibus esse putari.
At nequeant per se Partes sentire, nec esse.
Namque aliûm Sensus membrorum respuit omnium:
Nec Manus à nobis potis est secreta, neque ulla
Corporis omnino sensum pars sola tenere.
Linquitur, ut totis Animalibus adsimulentur;
Vitali ut possint consentire undique Sensu.
Qui poterunt igitur rerum primordia dici,
Et lethi vitare vias, Animalia cum sint,
Atque Animalibu' sint mortalibus una, eademque?
Quod tamen ut possint: ab cœtu concilioque,
Nil facient, præter volgum, turbamque Animantum;
Scilicet ut nequeant Homines, Armenta, Feræque;
Inter sese ullam rem gignere conveniendo
Per Veneris res, extra Homines, Armenta, Feraſque.
Quod si forte suum dimittunt corpore sensum,
Atque alium capiunt: quid opus fuit attribui, quod
Detrahitur? Tum præterea, (quod fugimus ante,)
Quatinùs in Pullos animaleis vertier Ova
Cernimus Alituum, Vermeisque effervere, terram
Intempestivos cum putror cepit ob imbreis:
Scire licet gigni posse ex non Sensibu' Sensus.
Quòd si forte aliquis dicet, duntaxat oriri
Posse ex non Sensu Sensus, sed mobilitate
Ante aliqua tanquam partum, quàm proditur extra:

Huic

complete Animal of itſelf; but no ſingle Part can perceive or exiſt of itſelf, for each Part requires an Union with the other Parts, to make it capable of Senſe, nor can the Hand feel any more, or any other Part retain its Senſe, when ſeparated from the Body. Theſe Seeds therefore muſt be perfect Animals, and ſo unite together in a vital Senſibility; but how then can theſe Seeds be ſaid to be eternal, and ſecure from Death, when they have the Nature of Animals, and are one and the ſame with them in all Reſpects, and therefore are mortal, and muſt die?

But allow theſe Seeds to be ſenſible and incorruptible too, yet, by their Union and Agreement, they can produce nothing but Animals and Things ſenſible; that is, Mankind, and Cattle, and wild Beaſts, can produce nothing but Men, and Cattle, and wild Beaſts. [How then could Things inſenſible, as Trees, Metals, have a Being?]

If you ſay theſe Seeds, in mingling together, loſe their own proper Senſe, and aſſume another, what need you impute any Senſe at all to them, when they muſt loſe it again? Beſides, as we have proved before, ſince we perceive the Eggs of Birds are changed into living Young, and that Worms break out of the Earth, when it is made rotten by unſeaſonable Showers, we may conclude, that Things ſenſible may ariſe from inſenſible Seeds.

If any one will aſſert here, that Senſe indeed may proceed from inſenſible Seeds, by a Sort of Change made in the Seeds, by virtue of the Thing that generates, [z] before the Animal is formed, *No Senſe before the Animal.*

[z] The Principles, ſeparately taken, are incapable of Change, and the Senſe of no Animal can be produced, before the

Huic ſatis ilud erit planum facere, atque probare,
Non fieri partum, niſi concilio ante coacto:
Nec commutari quicquam ſine conciliatu
Primorum, ut nequeunt ullius corporis eſſe
Senſus ante ipſam genitam naturam Animantis.
Nimirum quia Materies disjecta tenetur
Aëre, Fluminibus, Terris, Flammaque creatis:
Nec congreſſa modo vitaleis convenienti
Contulit inter ſe motus, quibus omnituentes
Accenſi Senſus animantem quamque tuentur.
Præterea quamvis Animantem grandior ictus,
Quàm patitur natura, repente adfligit, & omneis
Corporis, atque animi pergit confundere Senſus.
Diſſolvuntur enim poſituræ Principiorum
Et penitùs motus vitales impediuntur,
Donec Materies omnes concuſſa per artus,
Vitales Animæ nodos è corpore ſolvit,
Diſperſamque foras per caulas ejecit omneis.
Nam quid præterea facere ictum poſſe reamur
Oblatum, niſi diſcutere, ac diſſolvere quæque?
Fit quoque, uti ſoleant minus oblato acriter ictu
Relliquiæ motus vitalis vincere ſæpe,
Vincere, & ingenteis plagæ ſedare tumultus,

Inque

formed, it will be sufficient plainly to shew him, that no Animal can be formed but by an Union first of the Seeds, nor can any thing be changed but by Agreement of the Seeds, so that there can be no such thing as Sense in any Body, before the Animal is completely formed; and for this Reason, because the Seeds lie scattered in the Air, the Water, the Earth, the Fire, nor have they yet united together, after a proper manner, into any vital Motions, by which the Senses of any Animal may be produced, in order to guide and preserve it.

Besides, [a] a Blow falling upon any Animal, heavier than its Nature can endure, immediately torments it, and confounds all its Senses both of Body and Mind; for the Connexion of the Seeds is dissolved, and the vital Motions are wholly obstructed, till the Force of the Blow being agitated violently through the Limbs, dissolves the vital Ties of the Soul from the Body, and compels her, scatter'd and broken to pieces, to fly out through every Pore: For what can we conceive to be the Effect of such a Stroke, but to separate and dissolve the Seeds that were united before?

And then it happens, when the Blow falls with less Violence, that the Remains of vital Motion often get the better, they recover and calm the great Disorders of the Blow, and recall

the Animal is perfected; because Sense requires such an Agreement of vital Motions, as we should in vain expect in the Seeds of Things, which fly confusedly scatter'd up and down in the Air, the Earth, the Water, and Fire.

[a] He appeals to Experience, for a violent Stroke, which only dissolves the Texture and Connexion of the little Bodies of which the Animal consists, takes away all manner of Sense; if the Stroke be weaker, the Animal may be restored to its proper State, after some small Discomposure of the little Bodies, the Disposition to vital Motion still having the upper hand, and not being quite broken and dissolved.

Inque ſuos quicquid rurſus revocare meatus,
Et quaſi jam lethi dominantem in corpore motum
Diſcutere, ac pœne amiſſos accendere Senſus.
Nam, quare potius lethi jam limine ab ipſo
Ad vitam poſſint conlecta mente reverti,
Quàm quo decurſum prope jam fiet, ire, & abire?
Præterea, quoniam dolor eſt ubi Materiaï
Corpora vi quadam per viſcera viva, per artus
Sollicitata ſuis trepidant in ſedibus intus:
Inque locum quando remigrant, fit blanda Voluptas:
Scire licet, nullo Primordia poſſe dolore
Tentari: nullamque Voluptatem capere ex ſe:
Quandoquidem non ſunt ex ullis Principiorum
Corporibus, quorum Motus novitate laborent:
Aut àliquem fructum capiant Dulcedinis almæ.
Haud igitur debent eſſe ullo prædita ſenſu.
Denique, uti poſſint ſentire Animalia quæquè,
Principiis ſi etiam 'ſt Senſus tribuendus eorum:
Quid? Genus humanum propritim de quibu' factum 'ſt?
Scilicet & riſu tremulo concuſſa cachinnant,
Et lacrymis ſpargunt rorantibus ora, genaſque,
Multaque de rerum miſtura dicere callent,
Et ſibi proporro quæ ſint primordia quærunt.

Quandoquidem

every thing again into its proper Channel, they rescue the Body, as it were, from the Jaws of Death, and give new Life to the Senses that were almost destroyed; else why should Creatures rather return to Life from the very Gates of Death with new Spirits, than when they were just entring in, proceed on, and utterly perish?

Further, [b] since we feel Pain when the Seeds are shaken from their natural State and Situation within, and are disordered through all the Bowels and Limbs by any outward Force, and when they return again into their proper Place, a quiet Pleasure immediately succeeds, you may conclude, that simple Seeds cannot be tormented with Pain, nor of themselves be affected with Pleasure; because they do not consist of Principles or other Seeds, by whose violent Motions they may be disturbed, or be delighted with any Pleasure they can give; and therefore they cannot possibly be indued with any Sense at all.

Again, [c] if, in order to produce Creatures with Sense, Sense must be imputed to the Seeds from whence they are formed, of what Principles, I pray, is the human Race properly composed? Of such, no doubt, as laugh, and shake their little Sides, such as bedew their Face and Cheeks with flowing Tears, such as can wisely talk how Things are mixed, and such as search of what first Principles themselves are formed;

[b] The Principles of Things are simple, nor can their Parts be driven from the State in which they are, nor restored into the same State again; and therefore, being not to be affected with Pleasure or Pain, they must be destitute of all Sense.

[c] If Things, because they are sensible, must spring from sensible Seeds, then Men who laugh, weep, *&c.* must be formed of Seeds that laugh, weep, *&c.* If laughing, weeping, and wise Things can be made of Seeds that neither laugh, weep, nor are wise, why should not sensible Things proceed from Seeds that are wholly insensible?

Quandoquidem totis mortalibus adſimulata
Ipſa quoque ex aliis debent conſtare elementis ;
Inde alia ex aliis, nuſquam conſiſtere ut auſis.
Quippe ſequar, quodcunque Loqui, Ridereque dices,
Et Sapere, ex aliis eadem hæc facientibus, ut ſit.
Quòd ſi delira hæc, furioſaque cernimus eſſe :
Et ridere poteſt ex non ridentibu' factus,
Et ſapere, & doctis rationem reddere dictis,
Non ex Seminibus ſapientibus, atque diſertis :
Quî minus eſſe queant ea, quæ Sentire videmus
Seminibus permiſta carentibus undique Senſu ?
Denique cœleſti ſumus omnes ſemine oriundi :
Omnibus ille idem Pater eſt, unde alma liquenteis
Humorum guttas Mater cum Terra recepit,
Fœta parit nitidas fruges, arbuſtaque læta,
Et genus humanum, & parit omnia ſæcla ferarum,
Pabula cùm præbet, quibus omnes corpora paſcunt,
Et dulcem ducunt vitam, prolemque propagant.
Quapropter merito Maternum nomen adepta 'ſt.
Cedit item retrò de Terra quod fuit ante,
In terras : & quod miſſum 'ſt ex Ætheris oris,
Id rurſum Cœli rellatum templa receptant :
Nec ſic interimit mors res, ut Materiaï
Corpora conficiat, ſed cætum diſſupat ollis :

Inde

for all Things that enjoy the Faculties of perfect Animals, must consist of other Seeds like them, and these must arise from others; and thus the Progression would be infinite. I urge further, whatever you observe to speak, to laugh, to be wise, must proceed from other Seeds that can perform the same; but if this be ridiculous and downright Madness, and Things that can laugh, can spring from Seeds that never smile, and the Wise, that learnedly dispute, are produced from foolish Seeds and stupid, what hinders, that sensible Things may not as well be formed from Seeds without any manner of Sense at all?

LASTLY, [d] we all spring from Ætherial Seed; we have all one common Parent; when the kind Earth, our Mother, receives the quickening Drops of Moisture from above, she conceives and brings forth shining Fruits, and pleasant Trees, the human Race, and all the Race of Beasts; she yields them proper Food on which they feed, and lead a pleasant Life, and propagate their Kind, and therefore has she justly gained the Name of Mother. The Parts that first from Earth arose, return to Earth again; what descended from the Sky, those Parts brought back again the Heavens receive; nor does Death so put an end to Beings, as to destroy the very Seeds of them, but only disunites

[d] He recapitulates his former Arguments; the Earth becomes fruitful by the Showers, and produces Corn, Grass, &c. by which sensible Things are nourished; but the Heavens, from whence the Showers fall, are insensible, the Showers are insensible, and the Earth no more sensible than they. When Animals are dissolv'd, Part of them flies back to Heaven, Part returns to Earth, insensible Things both of them. The Particles that at one time are wholly destitute of Sense, being disposed in a new Order, become sensible at another; and sensible Things, when that Order of the Seeds is changed, grow stupid, and lose their whole Power of Sense and Perception.

Inde aliis aliud conjungit, & efficit, omnes
Res ut convertant formas, mutentque colores,
Et capiant Sensus, & puncto tempore reddant:
Ut noscas referre, eadem Primordia rerum
Cum quibus, & quali positura contineantur.
Et quos inter se dent motus, accipiantque:
(Neve putes æterna penes residere potesse
Corpora prima, quòd in summis fluitare videmus
Rebus, & interdum nasci, subitoque perire:)
Quin etiam refert nostris in Versibus ipsis,
Cum quibus, & quali sint ordine quæque locata.
Namque eadem Cælum, Mare, Terras, Flumina, Solem
Significant: eadem Fruges, Arbusta, Animanteis:
Si non omnia sint, at multo maxima pars est
Consimilis: Verùm positura discrepitant hæc.
Sic ipsis in rebus item jam Materiaï,
Intervalla, Viæ, Connexus, Pondera, Plagæ,
Concursus, Motus, Ordo, Positura, Figuræ
Cum permutantur, mutari Res quoque debent.
Nunc animum nobis adhibe veram ad rationem.
Nam tibi vehementer nova res molitur ad aureis
Accidere, & nova se species ostendere rerum.
Sed neque tam facilis res ulla 'st, quin ea primum
Difficilis magis ad credendum constet: itemque
Nil adeo magnum, nec tam mirabile quicquam
Principio, quod non minuant mirarier omnes
Paullatim; ut Cœli clarum purumque colorem,
Quemque in se cohibent palantia sidera, passim,
Lunæque, & solis præclara luce nitorem:

Omnia

them, then makes new Combinations, and is the Cauſe that all Things vary their Forms, and change their Colours, become ſenſible, and in a moment loſe all their Senſe again. You may know from hence, of what Importance it is, with what the firſt Seeds of Things are united, and in what Poſition they are contained, and what are the ſeveral Motions they give and take among themſelves; and from hence you may conclude, that theſe firſt Seeds are not the leſs eternal, becauſe you perceive them floating, as it were, upon the Surface of Bodies, and ſubject to change, to be born, and die. It is of like Concern, with what the ſeveral Letters are joined in theſe Verſes of mine, and in what Order each of them is diſpoſed; for the ſame Letters make up the Words to ſignify the Heaven, the Sea, the Earth, the Rivers, the Sun; the ſame expreſs the Fruits, the Trees, the Creatures; if they are not all, yet by much the greater Part are alike, but they differ in their Situation: ſo likewiſe in Bodies, when the Intervals of the Seeds, their Courſes, Connexions, Weights, Strokes, Union, Motions, Order, Poſition, Figure, when theſe are changed, the Things themſelves muſt be changed likewiſe.

Now, apply your Mind cloſely to the Documents of true Reaſon, for a new Scheme of Philoſophy preſſes earneſtly for your Attention, a new Scene of Things diſplays it ſelf before you; yet there is nothing ſo obvious, but may at firſt View ſeem difficult to be believed, and there is nothing ſo prodigious and wonderful at firſt, that Men do not by degrees ceaſe to admire: for ſee the bright and pure Colour of the Sky, poſſeſſed on every ſide by wandering Stars, and the Moon's Splendor, and the Sun's glorious Light, *Many Worlds.*

Omnia quæ ſi nunc primùm mortalibus adſint,
Ex improviſo ceu ſint objecta repente:
Quid magis his rebus poterat mirabile dici,
Aut minùs ante quod auderent fore credere gentes?
Nil ut opinor, ita hæc ſpecies miranda fuiſſet;
Quom tibi jam nemo feſſus ſatiate videndi
Suſpicere in cœli dignatur lucida templa:
Deſine quapropter novitate exterritus ipſa
Exſpuere ex animo rationem: ſed magis acri
Judicio perpende, &, ſi tibi vera videtur,
Dede manus: aut, ſi falſa eſt, accingere contra.
Quærit enim ratione Animus, cum ſumma loci ſit
Infinita foris hæc extra mœnia mundi;
Quid ſit ibi porro, quò proſpicere uſque velit mens,
Atque animi jactus liber quo pervolet ipſe.
Principio, nobis in cunctas undique parteis
Et latere ex utroque, infra, ſuperaque, per Omne
Nulla 'ſt finis, (uti docui) res ipſaque per ſe
Vociferatur, & elucet natura Profundi.
Nullo jam pacto veriſimile eſſe putandum 'ſt,
Undique cum vorſus ſpatium vacet infinitum,
Seminaque innumero numero, ſummaque profunda
Multimodis volitent æterno percita motu:
Hunc unum Terrarum orbem, Cœlumque creatum:
Nil agere illa foris tot corpora Materiaï,
Cum præſertim hic ſit natura factus, & ipſa

Sponte

theſe, if they now firſt ſhone to mortal Eyes, and ſuddenly preſented to our View, what could more wonderful appear than theſe? and what before could Men leſs preſume to expect? Nothing ſurely, ſo ſurprizing would the Sight have been; but now, quite tired and cloyed with the Proſpect, none of us vouchſafes, ſo much as to caſt our Eyes upwards towards the bright Temples of the Sky; therefore do not be frightened, and conceive an Averſion to an Opinion, becauſe of its Novelty; but ſearch it rather with a more piercing Judgment, if it appears true to you, embrace it, if falſe, ſet yourſelf againſt it.

Now, I ſhould be glad to know, ſince, without the Walls of this World, the viſible Heavens, there lies an [e] infinite Space, what is contained there: This the Mind deſires eagerly to ſearch into, and, by its own Vigour, to range over freely, and without obſtruction.

And firſt, ſince there is no Bound to Space in any Part of it, on no Side of it, neither above or below, as I have proved, and the Thing it ſelf proclaims it, and the very Nature of Space confirms it; we are not to ſuppoſe, (ſince this Space is infinitely extended every way, and the Seeds innumerable fly about this mighty Void in various manners, urged on by an eternal Motion) that this one Globe of Earth, and the viſible Heavens only were created, and that ſo many Seeds of Matter that lie beyond do nothing; eſpecially ſince this World was made naturally, and without Deſign, and the Seeds of Things of

[e] *Lucretius* inſiſts, that there is an infinite Void, and that an Infinity of Seeds are flying up and down in it, but all thoſe Seeds did not unite to produce this World of our's; and therefore why ſhould not ſome Atoms, in other Parts of this infinite Void, compoſe other Frames very like or unlike this World that we inhabit? Eſpecially ſince Nature acts the ſame throughout, and exerciſes the ſame Power through all Space?

their

Sponte ſua forte offenſando ſemina rerum
Multimodis, temerè, incaſsùm, fruſtráque, coacta
Tandem cooluerint ea, quæ conjecta repente
Magnarum rerum fierent exordia ſemper,
Terraï, Maris, & Cæli, generiſque Animantum.
Quare etiam atque etiam taleis fateare neceſſe 'ſt
Eſſe alios alibi congreſſus materiaï,
Qualis hic eſt, avido complexu quem tenet æther.
Præterea, cùm Materies eſt multa parata:
Cum Locus eſt præſto: nec res, nec cauſa moratur
Ulla: geni debent nimirum, & confieri res.
Nunc & Seminibus ſi tanta 'ſt copia, quantam
Enumerare ætas animantum non queat omnis:
Viſque eadem, & natura manet, quæ Semina rerum
Conjicere in loca quæque queat, ſimili ratione,
Atque huc ſunt conjecta: Neceſſe 'ſt confiteare
Eſſe alios aliis Terrarum in partibus orbeis,
Et varias Hominum genteis, & Sæcla Ferarum.
Huc accedit, ut in Summa res nulla ſit una,
Unica quæ gignatur, & unica, ſolaque creſcat:
Quin cujuſque ſient ſæcli, permultaque eodem
Sint genere: in primis animalibus indice mente.
Invenies ſic montivagum genus eſſe Ferarum,
Sic Hominum genitam prolem, ſic denique mutas
Squamigerum pecudes, & corpora cuncta Volantum.

Quapropter

their own accord justling together by Variety of Motions, rashly sometimes, in vain often, and to no purpose, at length suddenly agreed and united, and became the Beginning of mighty Productions, of the Earth, the Sea, and the Heavens, and the whole Animal Creation. Wherefore it needs must be allowed, there were in many other places Agreements and Unions of the Seeds of the same Nature with this World of our's, surrounded as it is with the fast Embraces of the Heavens above.

Besides; since there is a large Stock of Matter ready, and a Place suitable, nor is there any Thing or Cause to hinder and delay, Things must necessarily be produced, and come into Being. Now, since there is so great a Plenty of Seeds, that all the Ages of Men would not be sufficient to number them, and the same Power, the same Nature remains, that can dispose the Seeds of Things in any other Place, by the same Rule as they united in this World of our's, we must needs confess, that there are other Worlds in other Parts of the Universe, possessed by other kind of Inhabitants, both of Men and Beasts.

Add to this, that in the Universe there is no Species that has but one of a sort, that is produced alone, that remains single, and grows up by itself; but whatever Species Things are of, there are many more Individuals of the same kind. This you may observe in the Animal Creation, this you will find to be the State of the wild Beasts, of the Human Race, of the silent Fish, and of the whole Brood of Birds. [f] By

[f] There must be more Suns, more Earths than one, because the Earth, the Heavens, *&c.* are equally subject to perish with other compound Bodies; for the Philosophers against whom *Lucretius* disputes, asserted, that the Reason why the several Kinds of Animals contain many of each Kind, is, because the Individuals die.

Quapropter Cælum ſimili ratione fatendum 'ſt,
Terramque, & Solem, Lunam, Mare, cætera, quæ ſunt,
Non eſſe unica, ſed numero magis innumerali,
Quandoquidem vitæ depactus terminus altè
Tam manet his, & tam nativo hæc corpore conſtant,
Quàm genus omne, quod his generatim rebus abundat.

Quæ benè cognita ſi teneas: Natura videtur
Libera continuò Dominis privata ſuperbis,
Ipſa ſua per ſe ſponte omnia Diis agere expers.
Nam (proh ſancta Deûm tranquilla pectora pace,
Quæ placidum degunt ævum, vitamque ſerenam!)
Quis regere Immenſi Summam, quis habere Profundi
Indu manu validas potis eſt moderanter habenas?
Quis pariter Cælos omnes convertere? & omneis
Ignibus ætheriis terras ſuffire feraceis?
Omnibus inque locis eſſe omni tempore præſto?
Nubibus ut tenebras faciat cælique ſerena
Concutiat ſonitu? tum fulmina mittat, & ædeis
Sæpe ſuas diſturbet, & in deſerta recedens
Sæviat exercens telum, quod ſæpe nocenteis
Præterit, exanimatque indignos, inque merenteis?

Multaque

the ſame Reaſon you muſt own, that the Heavens, the Earth, the Sun, the Moon, the Sea, and all other Beings that are, do not exiſt ſingly, but are rather innumerable in their kind; for every one of theſe have a proper Limit fixed to their Beings, and are equally bound by the general Laws of Nature, with all thoſe whoſe Species include a numerous Train of Individuals under them.

These Things, if you rightly apprehend, Nature will appear free in her Operations, [g] wholly from under the Power of domineering Deities, and to act all Things voluntarily, and of herſelf, without the Aſſiſtance of Gods. For (O the undiſturbed Boſoms of the Powers above, bleſſed with ſacred Peace! how they live in everlaſting Eaſe, a Life void of Care!) Who can rule this infinite Univerſe? Who has the Power to hold the mighty Reins of Government in his Hands over this whole Maſs? Who likewiſe can turn about all theſe Heavens? and cheriſh all theſe fruitful Globes of Earth with celeſtial Heat? Who can be preſent at all Times, and in all Places? To darken the World with Clouds, to ſhake the vaſt Expanſion of the ſerene Heavens with Noiſe; to dart the Thunder, and often overturn his own Temples, to fly into the Wilderneſs, and furiouſly brandiſh that fiery Bolt, which often paſſes by the Guilty, and ſtrikes dead the Innocent and Undeſerving?

[g] He now falls foul upon Omnipotence and Divine Providence, and could not believe that the Nature of the Gods were ſufficiently powerful to govern the Affairs of the Univerſe; Chance, he inſiſts, is the ſole Director of all, becauſe he obſerv'd, that the Virtuous and Good frequently ſuffer, when the Wicked proſper.

Multaque poſt Mundi tempus genitale, diemque
Primigenum Maris, & Terræ, Soliſque coortum,
Addita corpora ſunt extrinſecùs, addita circum
Semina, quæ magnum jaculando contulit OMNE:
Unde Mare, & Terræ poſſent augeſcere: & unde
Adpareret ſpatium Cæli domus, altaque tecta
Tolleret à terris procul; & conſurgeret Aër.
Nam ſua cuique locis ex omnibus omnia plagis
Corpora diſtribuuntur, & ad ſua ſæcla recedunt:
Humor ad Humorem, Terreno corpore Terra
Creſcit; & Ignem ignes procudunt, Ætheraque Æ-
ther:
Donicum ad extremum creſcendi perfica finem
Omnia perduxit rerum Natura creatrix:
Ut fit, ubi nihilo jam plus eſt, quod datur intra
Vitaleis venas, quàm quod fluit, atque recedit:
Omnibus his ætas debet conſiſtere rebus:
His Natura ſuis refrænat viribus auctum.
Nam, quæcunque vides hilaro grandeſcere adauctu,
Paullatimque gradus ætatis ſcandere adultæ:
Plura ſibi adſumunt, quàm de ſe corpora mittunt,
Dum facilè in venas cibus omnis diditur: & dum
Non ita ſunt latè diſperſa, ut multa remittant:

Et

Besides, after this World was formed, and the Birth-day of the Sea, the Earth, and the Sun was over, there were many Particles of Matter added to them from without, many Seeds were received every way, which the infinite Mass or Universe constantly discharg'd; from whence the Sea and the Earth grew more strong and vigorous; from whence the Mansions of the Heavens were enlarged, and raised their lofty Arches higher from the Earth, and new Air was produced: for from [h] all the Parts of the Universe the proper Seeds are distributed, and retire severally in all Places to their proper Kinds; the Watery to the Water, the Earth increases by earthy Particles, the Fiery produce Fire, the Airy Air, till Nature, the Parent and Perfectress of all Things, improves all Beings, to the utmost Extent of Growth they are capable of. This comes to pass, when no more is received into the vital Passages, than what is perspired, and flies off; then it is, that the Growth of the Creature is at a full stand, and Nature restrains it from further Increase. *The World receives new Seeds.*

For whatever Creature you observe to thrive and grow lively and large, and by degrees climb up to a mature Age, receives more Particles into it self than it emits, because all the Nourishment is easily distributed into the Veins, and there confined, and the Particles are not so widely scatter'd, as in any Proportion to fly off, and so

[h] The infinite Universe supplies Seeds which the World receives, and they duly joining with it, becomes more strong and vigorous. When it emits as many Seeds as it receives, it is at a stand, neither increases nor decreases; but when more Seeds fly away than it receives, then it decays, and draws to an end. The Reason of the Growth and Decay of Animals is the same.

receive

Et plus dispendi faciant, quàm vescitur ætas,
Nam certè fluere, ac decedere corpora rebus
Multa, manus dandum 'st: sed plura accedere debent,
Donicum olescendi summum tetigere cacumen.
Inde minutatim vireis, & robur adultum
Frangit, & in partem pejorem liquitur ætas.
Quippe etenim quanto est res amplior, augmine demto,
Et quò latior est, in cunctas undique parteis
Pluria eò dispergit, & à se corpora mittit:
Nec facile in venas cibus omnis diditur eij:
Nec satis est, pro quàm largos exæstuat æstus,
Unde queat tantum suboriri ac suppeditare,
Quantum opus est: & quod satis est, Natura novare.
Jure igitur pereunt, cum rarefacta fluendo
Sunt; & cum externis succumbunt omnia plagis:
Quandoquidem grandi cibus ævo denique defit:
Nec tuditantia rem cessant extrinsecùs ullam
Corpora conficere, & plagis infesta domare.
Sic igitur magni quoque circum mœnia mundi
Expugnata dabunt labem, putreisque ruinas.
Omnia debet enim cibus integrare novando:
Nequicquam, quoniam nec venæ perpetiuntur
Quod satis est, neque quantum opus est, natura ministrat.
Jamque adeo affecta 'st ætas, effœtaque tellus
Vix animalia parva creat, quæ cuncta creavit
Sæcla, deditque ferarum ingentia corpora partu.

Haud

it bore formerly a lusty Race, and brought forth such prodigious Bodies of wild Beasts. For I can-

[i] The World, he concludes, grows old; the Earth, he says, produced formerly all Animals and Fruits of her own accord; but now, we find, she is past her Teeming-time, and therefore it must be allowed she grows old.

receive a Loſs faſter than they are ſupplied. For we muſt allow that many Particles certainly fly off from Bodies, but many others ought to be coming on, till the Thing arrives to its utmoſt Pitch of Bulk. Then, by degrees, its Strength and Maturity of Vigour decays, its Age melts away and diſſolves; for the larger any Body is, the greater it is in Size, when its Growth is over, it waſtes the more every way, and ſends out more Particles from it ſelf; nor is the Nouriſhment eaſily diſtributed into the Veins, or Nature ſufficient to renew and ſupply thoſe Effluvia it throws off in ſuch Abundance, in proportion as the Defect and the Loſs require. The Animal therefore muſt neceſſarily periſh, when it is made thin by continual Perſpiration, and all Things muſt at length fall by conſtant Strokes from without; for the Supplies from Food muſt fail in Old Age, nor do Bodies from without ever ceaſe to batter and break to pieces all Things with Strokes not to be reſiſted.

The World grows old.

By the ſame Rule [i] the viſible Heavens, the ſurrounding Walls of this great World muſt tumble down by continual Attacks, and fall to Ruins; it is Nouriſhment that preſerves Things in being by conſtant Supplies, but 'tis all to no purpoſe: for neither are the Veins capable to receive what is ſufficient, nor can Nature afford a proper and needful Recruit, even now the Age of the World is broken, and the Earth ſo feeble and worn out, that it ſcarce produces a puny Kind of Creatures, when it bore formerly a luſty Race, and brought forth ſuch prodigious Bodies of wild Beaſts. For I can-

[i] The World, he concludes, grows old; the Earth, he ſays, produced formerly all Animals and Fruits of her own accord; but now, we find, ſhe is paſt her Teeming-time, and therefore it muſt be allowed ſhe grows old.

Haud (ut opinor) enim mortalia ſæcla ſuperne
Aurea de Cælo demiſit funus in arva:
Nec mare, nec fluctus plangentes ſaxa creârunt:
Sed genuit Tellus eadem, quæ nunc alit ex ſe,
Præterea nitidas fruges, vinetaque læta
Sponte ſua primum mortalibus ipſa creavit.
Ipſa dedit dulceis fœtus, & pabula læta:
Quæ nunc vix noſtro grandeſcunt aucta labore:
Conterimuſque boves, & vires agricolarum:
Conficimus ferrum vix arvis ſuppeditati:
Uſque adeo pereunt fœtus, augentque labores.
Jamque caput quaſſans grandis ſuſpirat arator
Crebriùs incaſſum magnum cecidiſſe laborem:
Et cùm tempora temporibus præſentia confert
Præteritis, laudat fortunas ſæpe parentis:
Et crepat, antiquum genus ut pietate repletum
Perfacilè anguſtis tolerârit finibus ævum,
Cum minor eſſet agri multò modus ante viritim:
Nec tenet, omnia paullatim tabeſcere, & ire
Ad ſcopulum ſpatio ætatis defeſſa vetuſto.

not think all Species of Creatures descended from the Sky by a [k] golden Chain upon the Earth, nor were they by the Sea created, nor by the Waves that beat the Rocks; but the same Earth which now supports them, at first gave them Being. At first she kindly, of her own accord, raised the rich Fruits and delightful Vines for the Benefit of Men; she freely of herself offered her sweet Produce, the Corn and tender Grass, which now scarce rise to Perfection with all our Labour. We wear out our Oxen, and the Strength of our Husbandmen, we can scarce find Plough-shares sufficient to till the Fields, Things are so averse to grow, and our Labours are for ever increasing. And now the lusty Plowman shakes his Head, and laments the Pains he took was oft in vain; and when he compares the present Times with the glorious Days that are past, he blesses the good Fortune of those that were before him; he talks loudly how the old Race of Men [l], filled with Piety, no doubt spent their happy Days within the narrow Bounds of their own Field, (for then every Man's Share of Ground was much less than it is now) but has no Notion, fond Fool! that Things by degrees decay, and worn out by old Age, hasten to Ruin to the utmost Period of their Duration.

[k] It was the Opinion of *Homer*, that all Things were let down from Heaven to Earth by a Golden Chain.

[l] He scoffingly insinuates, that since the Earth produced of her own accord, Men had nothing to do but to worship the Gods.

The END *of the* SECOND BOOK.

THE ARGUMENT OF THE THIRD BOOK.

THIS is that Book of LUCRETIUS *which ought above all the reſt to be read with the greateſt Judgment and Diſcretion; for here he exerts his whole Force to prove, that the Soul is of a corporeal Nature, and conſequently ſubject to Death and Diſſolution, and that the Generality of Men being overaw'd by the Tyranny of Religion, are horribly miſtaken to believe, that they have reaſon to dread eternal Torments after Death. In the former Book, having explained the Nature and Properties of his Atoms, in the four remaining he applies himſelf to deſcribe the Effects which thoſe Atoms produce. He begins with the Praiſe of* Epicurus, *whom he extols for being the firſt who taught, that this World and all Things in it were*

were not made by the Deity, but by a fortuitous Concourſe of Atoms; and, by that means, delivering the Minds of Men from the Fear of the Gods, from the Terrors of Death, and the Dread of Puniſhments after Death. He then advances, that the Mind and the Soul are a Part of Man, in the ſame manner as the Feet, the Hands, the Arms, the Head, and other Members, and not a vital Habit of the whole Body, or an Accord and Conſent of all the Parts of the Body, which ſome of the ancient Philoſophers called Harmony. *To proceed with the greater Perſpicuity, he obſerves, that he uſes the words Mind and Soul promiſcuouſly, that they are Both but one Thing, only the Mind is the chief Part, and reſides in the Heart, becauſe Fear, Joy, and all the other Paſſions which obey and depend upon the Mind, diſcover themſelves there, while the Soul, in which the locomotive Faculty is ſolely placed, being diffuſed through the whole Body, is moved as the Mind pleaſes. He then endeavours to demonſtrate, that the Nature of the Mind and Soul is corporeal, becauſe the Mind touches the Soul, and moves it, and the Soul touches the Body; but where there is no Body, there can be no Touch. That this corporeal Mind is compoſed of Atoms extremely ſubtil, minute and round; and particularly, that this Mind conſiſts of Heat, Wind or Vapour, and Air, and of a Fourth, I know not what nameleſs Thing, wonderfully ſubtil, and moſt eaſy to be moved, which being ſeated in the Heart, is the Principle of Senſe. But how the Heat, the Wind, the Air, and this fourth nameleſs Thing are mingled, or what Proportion of each makes up the Compoſition, he confeſſes ingenuouſly he cannot tell. He aſſerts, that the Soul and the Body are ſo united together, that they cannot be ſeparated without the Deſtruction*

of both of them; and insists, that not only the Mind but the Body too has Perception, or rather the whole Animal composed of Body and Soul. He refutes the Opinion of Democritus, *who taught, that the respective Parts of the Soul are fitted and joined to the respective Parts of the Body; and having affirmed before, that the Mind is the most excellent Part of the whole Compound, he now further asserts, that the Life and Preservation of the Animal depends more on the Mind than on the Soul. He attempts to prove by six and twenty Arguments, that Minds and Souls are born with Bodies, and die with them; and, by the way, derides the Transmigration of* Pythagoras. *Death, he says, is Nothing, because the Soul being mortal, has Nothing to fear after Death; and urges, that if it be granted that the Soul is immortal, as* Plato *held, yet Death still is Nothing, since the separated Soul would not remember that she had ever been before. He laughs at the vain Anxiety of Men concerning their Sepulture, and proves that Death is not an Evil, because the Dead want not those good Things which the Living enjoy, but are exempted from those Calamities which afflict and torment us Wretches that are alive; that even Life itself is not a Thing very desirable, because it has Nothing new to give us, but always the same surfeiting Repetition of Pleasures, till at length we loath them. But lest the Fables which the Poets feign of Hell and of future Punishments should terrify us, he explains those Fables, and shews, that we feel those Torments while we are living, and have no reason to dread them after we are dead. And lastly, to the End of this Book, he puts us in mind that it is both foolish and absurd to bemoan ourselves that we must die, since the wisest of Men, and the greatest Princes*

and

and Emperors have been forced to ſubmit to the inevitable Stroke of Death; and inſiſts, that Men lead unquiet and anxious Lives, becauſe they avoid the Thoughts and Contemplations of Death, and are fooliſhly fond of that Life which they muſt one day loſe, which can ſupply them with no new Delights, and is expoſed to innumerable Dangers and Afflictions. And that after all, by the longeſt Life they can attain, they ſave not one Moment from the Length of Death, which is as much eternal to them who die to-day, as to thoſe who died many Ages ago.

T. Lucretii Cari

DE

RERUM NATURA

LIBER TERTIUS.

E TENEBRIS *tantis tam clarum extollere lumen*
Qui primus potuisti, illustrans commoda vitæ:
Te sequor ô GRAIÆ *gentis decus, inque tuis nunc*
Fixa pedum pono pressis vestigia signis,

Non

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE

THIRD BOOK.

O EPICURUS, who could firſt ſtrike ſo clear a Light from ſo great Darkneſs, and direct us in the proper Advantages of Life, Thee, the Glory of the *Grecian* Name, I follow; Thy Steps I cloſely trace with mine, not ſo much from a Deſire to rival Thee, as *The Praiſe of* Epicurus.

[a] He addreſſes himſelf to *Epicurus* of *Athens*, and calls him the Parent and Inventor of the *Epicurean* Philoſophy; he praiſes him for the Happineſs of his Wit, and the Benefits he conferred upon Mankind, by freeing them from the Belief of a Providence, and from the Fears and Terrors that attend that Opinion.

from

Non ita certandi cupidus, quàm propter amorem,
Quod te imitari aveo: Quid enim contendat Hirundo
Cycnis? aut quidnam tremulis facere artubus Hœdi
Conſimile in curſu poſſint, ac fortis Equi vis?
Tu Pater, & rerum Inventor: tu patria nobis
Suppeditas præcepta, tuiſque ex, Inclute, chartis,
Floriferis ut apes in ſaltibus omnia limant,
Omnia nos itidem depaſcimur aurea dicta,
Aurea, perpetua ſemper digniſſima vita.
Nam ſimul ac Ratio tua cœpit vociferari,
Naturam rerum haud Divina mente coortam,
Diffugiunt Animi terrores; mœnia mundi
Diſcedunt, totum video per Inane geri res.
Apparet Divûm numen, ſedeſque quietæ:
Quas neque concutiunt venti, neque nubila nimbis
Adſpergunt, neque nix acri concreta pruina
Cana cadens violat: ſemperque innubilus æther
Integit, & largè diffuſo lumine ridet.
Omnia ſuppeditat porrò Natura, neque ulla
Res animi pacem delibrat tempore in ullo.
At contra nuſquam apparent Acheruſia templa:
Nec Tellus obſtat, quin omnia diſpiciantur,
Sub pedibus quæcunque infra per Inane geruntur.
His tibi me rebus quædam divina Voluptas
Percipit, atque Horror, quod ſic Natura tua vi
Tam manifeſta patet ex omni parte retecta.
Et quoniam docui, cunctarum exordia rerum
Qualia ſint: & quàm variis diſtantia formis

Sponte

from the Love I bear, and the ardent Paſſion I profeſs to imitate thee; for how can the Swallow contend in Singing with the Swan? or what can Kids, with feeble Limbs, perform in running with the noble Horſe's Speed? Thou great Father, Founder of Philoſophy! Thou with Paternal Precepts doſt inſpire thy Sons, and from thy Writings, moſt illuſtrious Chief, as Bees ſuck Honey from the flowery Fields, we feed upon thy Golden Sentences, Golden, and fit eternally to live. For when thy Reaſon firſt began to prove, that Nature was not form'd by Powers Divine, the Terrors of the Mind all fled, the Walls of this great World lie open, and I ſee how Things are managed through the mighty Void. The Deity of the Gods, their calm Abodes appear, which neither Winds diſturb, nor Clouds o'erflow with Showers, nor the white-falling Snow, congealed by ſharpeſt Froſt, does ſpoil; but the unclouded Air ſurrounds them always, and ſmiles on them fully with diffuſed Light. Nature in every thing ſupplies their Wants; Nothing at any Time deſtroys their Peace. But the wide Tracts of Hell are no where ſeen; nor does the interpoſing Earth prevent our Sight, but we diſcover what beneath our Feet is doing in the Space below. In theſe Perſuits a certain Divine Pleaſure ſpreads round me, and I ſtand amazed, that by Thy Strength of Mind, all Nature every way lies naked to our View.

The Subject of this Book.

Since then [b] I have taught what are the firſt Seeds and Principles of Things, how they differ

[b] The Subject, he ſays, of this Book will be an accurate Enquiry into the Nature of the Soul, whoſe Mortality he will endeavour to evince, in order to free Mankind from the Fear of Death, and the Terrors of future Puniſhment.

in

Sponte ſua volitent alterno percita motu,
Quoque modo poſſint ex his res quæque creari:
Haſce ſecundum res ANIMI *natura videtur,*
Atque ANIMÆ *claranda meis jam verſibus eſſe:*
Et metus ille foras præceps Acheruntis agendus
Funditus, humanum qui vitam turbat ab imo;
Omnia ſuffundens mortis nigrore: neque ullam
Eſſe voluptatem liquidam puramque relinquit.
Nam, quòd ſæpe homines morbos magis eſſe timendos,
Infamemque ferunt vitam, quàm Tartara lethi,
Et ſe ſcire Animi naturam ſanguinis eſſe,
Nec prorſum quicquam noſtræ Rationis egere:
Hinc licet advertas animum, magis omnia Laudis,
Aut etiam Venti, ſi fert ita forte voluntas,
Jactari cauſas quàm quod res ipſa probetur:
Extorres iidem patria, longéque fugati
Conſpectu ex hominum, fœdati crimine turpi,
Omnibus ærumnis affecti denique vivunt:
Et quocunque tamen miſeri venere, parentant,
Et nigras mactant pecudes, & Manibu' divis

Inferias

in their Figures, and of themſelves fly about, beaten by mutual Strokes, and how from them all Beings are produced, the Nature of the *Mind* and of the *Soul* comes next to be explained in theſe my Lines, and all the Terrors of infernal Pains baniſhed, and headlong driven quite away, that from the Bottom ſo diſturb the Life of Man, and cover all Things with the Gloom of Death, and leave no Place for pure and unmixed Pleaſure to poſſeſs.

Fear of Death the Cauſe of all Evils.

For what Men vainly talk, [c] that Diſeaſes and an infamous Life are more to be feared than the Terrors of Death, and they know that the Soul conſiſts wholly in the [d] Blood, and therefore they want no Aſſiſtance from our Philoſophy, I would have you obſerve, that thoſe Boaſts are thrown out more for the ſake of Praiſe and popular Breath (if their Vanity by chance leads that way) than that they believe any ſuch thing; for let theſe very Men be baniſhed from their Country, and driven into a Deſert far from human Sight, ſtained with the Guilt of the foulеſt Crimes, yet they live on, afflicted as they are, with all Sorts of Miſery, and wherever the Wretches come, they fall a-ſacrificing, and ſlay [e] black Cattle, and offer Victims to the infernal

[c] Other Philoſophers, he ſays, have talk'd big about the Soul's Mortality, but when the Trial came, they ſtartled at the Approach of Death, and choſe patiently to live on, though ever ſo miſerably; and, when they came to die, were Cowards.

[d] Some were of Opinion, that the Soul was a Suffuſion of Blood about the Heart, and conſequently, that it is the Blood itſelf.

[e] The Ancients were uſed to offer black Victims to the infernal Gods and to the Dead, but white to the Gods above.

Gods;

Inferias mittunt : Multóque in rebus acerbis
Acriùs advertunt animos ad Relligionem.
Quò magis in dubiis hominem ſpectare periclis
Convenit, adverſiſque in rebus noſcere qui ſit.
Nam veræ voces tum demum pectore ab imo
Ejiciuntur, & eripitur Perſona, manet Res.
Denique Avarities, & Honorum cæca cupido,
Quæ miſeros homines cogunt tranſcendere fineis
Juris, & interdum ſocios ſcelerum, atque miniſtros
Noctеis atque dies niti præſtante labore
Ad ſummas emergere opeis : Hæc vulnera vitæ
Non minimam partem Mortis formidine aluntur.
Turpis enim Fama, & Contemptus, & acris Egeſtas
Semota ab dulci Vita ſtabilique videntur :
Et quaſi jam Lethi portas cunctarier ante :
Unde homines, dum ſe falſo terrore coacti
Refugiſſe volunt longè, longéque recêſſe :
Sanguine civili rem conflant : divitiaſque
Conduplicant avidi, cædem cædi accumulantes.
Crudeles gaudent in triſti funere Fratris :
Et Conſanguineûm menſas odere, timentque.
Conſimili ratione ab eodem ſæpe timore
Macerat invidia : ante oculos illum eſſe potentem,
Illum aſpectari, claroque incedere honore ;

Ipſi

Gods; and in this deplorable State, they, with more than common Zeal, apply themſelves to the Offices of Religion.

And therefore it is proper to view Men rather under a doubtful Fortune, and obſerve how they behave in Circumſtances of Diſtreſs; for then they ſpeak Truth from the bottom of their Hearts, the Maſk is pulled off, and the real Man ſhews undiſguiſed.

[f] Besides, Covetouſneſs and the blind Deſire of Honours, which compel unhappy Men to exceed the Bounds of Right, and urge on the Partners and Aſſiſtants of their Crimes to ſtrive Day and Night with the utmoſt Pains, to arrive at the Height of Wealth: Theſe Plagues of Life are chiefly nouriſhed by the Fear of Death; for Infamy, and Contempt, and ſharp Want, ſeem far removed from a ſweet and pure State of Life, and, as it were, hover about the Gates of Death; and therefore whilſt Men, poſſeſſed by a falſe Fear, labour to avoid, and ſtand at the remoteſt Diſtance from them, they add to their Heaps by Civil War, and, inſatiable as they are, double their Riches, heaping one Murder upon another. They laugh with cruel Delight at the ſad Funeral of a Brother, and hate and fear the Entertainments of their neareſt Relations.

From the ſame Cauſe and from the ſame Fear, Envy often becomes the Tormentor of Mankind; they complain that one is raiſed to Power before their Eyes, another to Reſpect, a third diſtinguiſhed by ſhining Honours, whilſt they

[f] *Faber* ſays, the following Lines contain ſo many excellent Things in them, that they cannot be ſufficiently conſidered and admired.

lie

Ipsi se in tenebris volvi, cænoque queruntur.
Intereunt partim statuarum, & nominis ergô:
Et sæpe usque adeo, Mortis formidine, vitæ
Percipit humanos odium, lucisque videndæ,
Ut sibi consciscant mœrenti pectore Lethum,
Obliti fontem curarum hunc esse Timorem,
Hunc vexare pudorem, Hunc vincula amicitiaï
Rumpere, & in summa pietatem evertere fundo.
Nam jam sæpe homines patriam, carosque parentes
Prodiderunt, vitare Acherusia templa petentes.
Nam veluti Pueri trepidant, atque omnia cæcis
In tenebris metuunt: Sic Nos in luce timemus
Interdum, nihilo quæ sunt metuenda magis, quàm
Quæ Pueri in tenebris pavitant, finguntque futura.
Hunc igitur terrorem animi, tenebrasque necesse 'st
Non radii solis, neque lucida tela diei
Discutiant, sed Naturæ species, Ratioque.
Primùm ANIMUM *dico (mentem quem sæpe vocamus)*
In quo consilium vitæ, regimenque locatum 'st,
Esse hominis Partem nihilo minus, ac Manus, & Pes,
Atque Oculi partes animantis totius extant.
Quamvis multa quidem Sapientum turba putârunt
Sensum animi certa non esse in parte locatum:
Verum Habitum quendam vitalem corporis esse,
Harmoniam Graii quam dicunt, quod faciat nos

Vivere

lie buried in Obscurity, and are trod upon like Dirt, and so they pine themselves to death for the sake of Statues and a Name; and some Men, from a Fear of Death, conceive so great a Hatred for Life, and the Preservation of their Being, that in a gloomy Fit they become their own Executioners; not considering that this Fear of Death is the Source of all their Cares, this breaks through all Shame, dissolves the Bonds of Friendship, and in short overturns the Foundations of all Goodness; for some we see betray their Country and their dear Parents, striving by that means to deliver themselves from Death, and the Pains of Hell.

For as Boys tremble, and fear every Thing in the dark Night, so we, in open Day, fear Things as vain and little to be feared, as those that Children quake at in the dark, and fancy advancing towards them. This Terror of the Mind, this Darkness then, not the Sun's Beams, nor the bright Rays of Day can scatter, but the Light of Nature and the Rules of Reason.

First then, [g] I say, the *Mind* of Man (which we commonly call the *Soul)* in which is placed the Conduct and Government of Life, is a Part of Man no less than the Hand, the Foot, the Eyes, are Parts of the whole Animal; though many of the Philosophick Herd have fancied, that the Sense of the *Mind* is not fixed to any particular Part, but is a sort of vital Habit of the whole Body, which the *Greeks* call

The Mind is a Substance.

[g] Some Philosophers held the Mind (the chief Part of the Soul, the Soul consisting of three Parts, the Mind, the Memory, and the Will) to be a vital Habit of Body, as Health in a Man; he insists it is a Part of Man distinct from the Body no less than the Hand, the Foot, &c. he will have it to be corporeal, and an integral Part of Man.

Vivere cum ſenſu, nulla cùm in parte fiet Mens:
Ut bona ſæpe Valetudo cùm dicitur eſſe
Corporis, & non eſt tamen hæc pars ulla Valentis:
Sic Animi ſenſum non certa parte reponunt:
Magnopere in quo mî diverſi errare videntur.
Sæpe utique in promptu Corpus, quod cernitur, ægrit,
Cùm tamen ex alia lætamur parte latenti:
Et retrò fit, uti contra ſit ſæpe viciſſim,
Cùm miſer ex animo, lætatur Corpore toto:
Non alio pacto, quàm ſi Pes cùm dolet ægri,
In nullo Caput interea ſit forte dolore.
Præterea molli ſomno cùm dedita membra,
Effuſumque jacet ſine ſenſu Corpus onuſtum:
Eſt aliud tamen in nobis, quod tempore in illo
Multimodis agitatur, & omneis accipit in ſe
Lætitiæ motus, & curas cordis inaneis.
Nunc Animam quoque ut in membris cognoſcere poſſis
Eſſe, neque Harmoniam corpus retinere ſolere:
Principiò fit, uti detracto Corpore multo,
Sæpe tamen nobis in membris Vita moretur.
Atque eadem rurſus cum Corpora pauca caloris

Diffugere,

Harmony; and thence flows all our Senſe, and the Mind has no particular Place for its Abode: As when we ſay, Health belongs to the Body, yet it is no Part of the Body that is in Health, ſo no particular Part, they tell us, is the Reſidence of the Mind; but in this they ſeem to be egregiouſly in the wrong, for often when ſome viſible Part of the Body ſuffers Pain, we feel Pleaſure in ſome other Part to us unſeen; and the contrary often happens in its turn, that a Man diſturb'd in Mind is perfectly well all over his Body, in the ſame manner as when a Man has the Gout in his Foot, his Head at the ſame time is free from Pain. *Not Harmony.*

Besides, when our Limbs are given up to ſoft Sleep, and the wearied Body lies ſtretched at length without Senſe, there is ſomething within that in the very time is variouſly affected, and receives into itſelf all the Impreſſions of Joy, and empty Cares that torment the Heart.

But to convince you, that the Soul is a Part like other Limbs, and not as a Harmony, takes up the whole Body[h], obſerve firſt that many Members of the Body may be cut off, yet often Life remains in the reſt; and again, the ſame Life, when a few certain Particles of vital Heat

[h] In Muſical Inſtruments, if you take off ſome of the Strings, the Accord periſhes; ſo if the Soul were the Harmony of the Body, when ſome of the Members were lopt off, the Harmony of the whole Body would periſh likewiſe, and ſo the Life and Senſe would be gone; but we know ſome of the Limbs may be loſt, and Men may retain their Senſes: And therefore the Life and Senſe do not proceed from the Harmony of the Members. Indeed if ſome certain Particles of Heat and Vapour fly off from the Body, the Animal will die; and therefore Life and Senſe depend upon thoſe Particles of Heat and Vapour.

Diffugere, foraſque per os eſt editus aër:
Deſerit extemplo venas, atque oſſa relinquit:
Noſcere ut hinc poſſis, non æquas omnia parteis
Corpora habere, neque ex æquo fulcire ſalutem:
Sed magis hæc, Venti quæ ſunt, calidique Vaporis
Semina, curare in membris ut Vita moretur.
Eſt igitur Calor, ac Ventus vitalis in ipſo
Corpore, qui nobis moribundos deſerit artus.
Quapropter, quoniam 'ſt Animi natura reperta,
Atque Animæ, quaſi pars Hominis: redde Harmoniai
Nomen ab organico ſaltu delatum Heliconis,
Sive aliunde ipſi porro traxere: & in illam
Tranſtulerunt, proprio quæ tum res nomine egebat,
Quicquid id eſt, habeant: Tu cætera percipe dicta.
Nunc Animum, atque Animam dico conjuncta teneri
Inter ſe, atque unam naturam conficere ex ſe:
Sed Caput eſſe quaſi, & dominari in corpore toto
Conſilium, quod nos Animum, Mentemque vocamus:
Idque ſitum media regione in pectoris hæret.
Hîc exſultat enim Pavor, ac Metus hæc loca circum
Lætitiæ mulcent: hîc ergo Mens Animuſque 'ſt.
Cætera pars Animæ per totum diſſita corpus
Paret: & ad numen Mentis, momenque movetur:

Idque

fly off, and our last Breath is blown through the Mouth, immediately leaves Possession of our Veins and Bones; and this will give you to understand, that all the Particles of Matter are not of equal Consequence to the Body, nor do they equally secure our Lives; but the Particles of our Breath, and the warm Vapour, are of principal Concern to preserve Life to us in all our Limbs. This Warmth therefore, this Vapour resides in the Body, and leave our Limbs as Death makes Approaches towards us.

But since the Nature of the Mind and Soul is discover'd to be a Part of the Man, give these Fiddlers their favourite word *Harmony* again, taken from the Musick of the Harp, or whence soever they borrowed the Name, and applied it to the Soul, which then forsooth! had no proper Name of its own; however it be, let them take it again, and do you attend what follows.

The Mind and Soul are one.

I say then, that the [1] Mind and Soul are united together, and so joined make up one single Nature; but what we call the Mind is as it were the Head, and conducts and governs the whole Body, and keeps its fixed Residence in the middle Region of the Heart. Here our Passions live, our Dread and Fear beat here, here our Joys make every thing serene, here therefore must be the Seat of the Mind. The other Part, the Soul, spread through the whole Body, obeys this Mind, and is moved by the Nod and Impulse of it,

[1] He uses the words *Mind* and *Soul* indifferently; the Mind, which is the noblest Part in which the Reason resides, he places in the Heart, where all the Passions have their Seat likewise: The Soul, which is the inferior Part of this Nature, and in which the locomotive Faculty is placed, is diffused through the whole Body, and moves as the Mind directs; yet, tho' it obeys the Mind, it partakes not of all its Passions, but of those alone that are violent.

Idque sibi solum per se sapit, & sibi gaudet:
Cùm neque res Animam, neque Corpus commovet ulla.
Et quasi cùm Caput aut Oculus, tentante dolore,
Læditur in nobis, non omni concruciamur
Corpore: sic Animus nonnunquam læditur ipse,
Lætitiaque viget, cùm cætera pars Animai
Per membra, atque artus nulla novitate cietur.
Verùm ubi vehementi magis est commota metu Mens,
Consentire Animam totam per membra videmus:
Sudores itaque & pallorem existere toto
Corpore, & infringi linguam, vocemque aboriri,
Caligare oculos, sonere aureis, succidere artus.
Denique concidere ex Animi terrore videmus
Sæpe homines, facilè ut quivis hinc noscere possit,
Esse Animam cum Animo conjunctam; quæ cum Animi vi
Percussa 'st, exin corpus propellit, & icit.
Hæc eadem ratio naturam Animi, atque Animai
Corpoream docet esse, ubi enim propellere membra,
Conripere ex somno corpus, mutareque voltum,
Atque hominem totum regere ac versare videtur:
(Quorum nil fieri sine tactu posse videmus:
Nec tactum porro sine Corpore) nonne fatendum 'st
Corporea natura Animam constare, Animamque?
Præterea pariter fungi cum Corpore: & una
Consentire Animum nobis in corpore cernis.
Si minùs offendit vitam vis horrida teli
Ossibus ac nervis discluſis intùs adacta:
Attamen insequitur languor, terræque petitus
Suavis, & in terra Mentis qui gignitur æstus,
Interdumque quasi exsurgendi incerta voluntas.

Ergo

This Mind can think of itſelf alone, and of it ſelf rejoice, when the Soul and Body are no ways affected; as when the Head or the Eye is hurt by ſenſible Pain, we are not tormented over all the Body, ſo the Mind is ſometimes grieved or cheered with Joy, when the other Part, the Soul, diffuſed through the Limbs, is agitated with no new Motion at all. But when the Mind is ſhaken with violent Fear, we ſee the Soul through all the Limbs partakes of the ſame Diſorder. Cold Sweats and Paleneſs ſpread all the Body over, the Tongue faulters, the Speech fails, the Eyes grow dim, the Ears tingle, and the Limbs quake; in ſhort, we often ſee Men fall down from a Terror of the Mind: From whence we may eaſily conclude, that the Soul is united with the Mind, and when ſhe is preſſed forcibly with its Impulſe, then ſhe drives on the Body, and puts it in Motion.

By this Rule therefore we find, that the Nature of the Mind and Soul is corporeal; for we ſee it ſhakes the Limbs, rouſes the Body from Sleep, changes the Countenance, and directs and governs the whole Man. (Nothing of which can be done without Touch, and there can be no Touch without Body.) Should we not then allow that the Mind and Soul are corporeal in their Nature?

Besides, you ſee the Mind ſuffers with the Body, and bears a ſhare with it in all it endures; if the violent Force of a Dart pierces the Body, and ſhatters the Bones and Nerves, tho' Death does not inſtantly follow, yet a Faintneſs ſucceeds, and a ſort of pleaſing Deſire of ſinking to the ground, a paſſionate Reſolution to die, and then again the Will fluctuates and wiſhes to live: the Mind therefore muſt needs be of a corporeal

Ergo corpoream naturam Animi esse necesse 'st:
Corporeis quoniam telis, ictuque laborat.
Is tibi nunc Animus quali sit corpore, & unde
Constiterit, pergam rationem reddere dictis.
Principio esse aio persubtilem atque minutis
Perquam Corporibus factum constare: id ita esse,
Hinc licet advertas animum, ut pernoscere possis,
Nil adeo fieri celeri ratione videtur,
Quàm si Mens fieri proponit, & inchoat ipsa.
Ociùs ergo Animus, quàm res se perciet ulla,
Ante oculos quarum in promptu natura videtur.
At quod mobile tantopere 'st constare rotundis
Perquàm seminibus debet, perquàmque minutis:
Momine uti parvo possint impulsa moveri.
Namque movetur Aqua, & tantillo momine flutat:
Quippe volubilibus, parvisque creata figuris.
At contrà Mellis constantior est natura,
Et pigri latices magis, & cunctantior actus.
Hæret enim inter se magis omnis materiaï
Copia: Nimirum quia non tam lævibus extat
Corporibus, neque tam subtilibus atque rotundis:
Namque Papaverum, aura potest suspensa, levisque
Cogere, ut ab summo tibi diffluat altus acervus:
At contra Lapidum conjectum, Spiclorumque
Nenu potest: igitur parvissima corpora quantò
Et lævissima sunt, ita mobilitata feruntur.
At contrà quò quæque magis cum pondere magno,
Asperaque inveniuntur, eò stabilita magis sunt.
Nunc igitur, quoniam 'st Animi natura reperta
Mobilis egregie: Perquàm constare necesse 'st
Corporibus parvis & lævibus atque rotundis.

Nature, becauſe it ſuffers Pain by the Stroke of Darts, which we know are Bodies.

I SHALL now go on to explain clearly of what ſort of Body this Mind conſiſts, and of what Principles it is formed. [k] And firſt I ſay, that the Mind is compoſed of very ſubtil and minute Seeds; that it is ſo, attend cloſely, and you will find that nothing is accompliſhed with ſo much Speed as what the Mind attempts, and propoſes to execute; the Mind therefore is ſwifter in its Motion, than any thing in Nature we can ſee or conceive. But that which is ſo exceedingly quick to move, muſt conſiſt of the roundeſt and moſt minute Seeds, that may be ſet a-going by the lighteſt Impulſe. So Water is moved and diſpoſed to flow by ever ſo little Force, becauſe it is compoſed of ſmall and ſlippery Seeds; but the Nature of Honey is more tenacious, its Moiſture is more unactive, and its Motion ſlower; its Principles ſtick cloſer among themſelves; and for this Reaſon, becauſe it conſiſts of Seeds not ſo ſmooth, ſo ſubtil, and ſo round. And thus, a large Heap of Poppy-Seeds is blown away by the gentleſt Breath of Wind, and ſcatter'd abroad; but no Blaſt can ſhake a Heap of Stones or Darts: Therefore the ſmoother and ſmaller the Principles of Bodies are, the more eaſily they are diſpoſed to Motion, and the heavier and rougher the Seeds are, the more fixed and ſtable they remain.

The Mind compoſed of Seeds ſmall and round.

SINCE therefore the Nature of the Mind is ſo exceedingly apt to move, it muſt needs conſiſt of ſmall, ſmooth, and round Seeds; and your

[k] The Atoms that compoſe the Mind are very ſmall, ſmooth and round; for the Mind is moſt eaſy to be moved, and therefore muſt be compoſed of Particles which by their Texture are moſt ſubject to Motion.

knowing

Quæ tibi cognita res in multis, O BONE, rebus
Utilis invenietur, & oportuna cluebit.
Hæc quoque res etiam naturam deliquat ejus,
Quàm tenui constet textura; quàmque loco se
Contineat parvo, si possit conglomerari:
Quòd simul atque Hominem lethi secura quies est
Indepta, atque Animi natura, Animæque recessit:
Nil ibi limatum de toto Corpore cernas
Ad speciem, nil ad pondus: Mors omnia præstat,
Vitalem præter sensum, calidumque vaporem.
Ergo Animam totam perparvis esse necesse 'st
Seminibus, nexam per venas, viscera, nervos:
Quatinus omnis ubi è toto jam Corpore cessit,
Extima membrorum circum-cæsura tamen se
Incolumem præstat: Nec defit ponderis hilum:
Quod genus est Bacchi cùm flos evanuit, aut cùm
Spiritus Unguenti suavis diffugit in auras:
Aut aliquo cùm jam Succus de corpore cessit:
Nil oculis tamen esse minor res ipsa videtur
Propterea, neque detractum de pondere quicquam:
Nimirum, quia multa, minutaque semina Succos
Efficiunt, & Odorem in toto corpore rerum.
Quare etiam atque etiam Mentis naturam, Animæque
Scire licet perquam pauxillis esse creatam
Seminibus: Quoniam fugiens nil ponderis aufert.
Nec tamen hæc simplex nobis natura putanda 'st.
Tenuis enim quædam moribundos deserit Aura

Mista

knowing this, my ſweet Youth, will be found of great uſe, and very ſeaſonable for your future Enquiries. This will diſcover clearly to you its Nature, of what tenuious Parts it is formed, in how ſmall a Space it might be contained, if it could be ſqueezed together; for when the calm Reſt of Death has poſſeſſion of a Man, and the Mind and Soul are retired, you will find nothing taken away from the Body as to its Bulk, nothing as to its Weight. Death leaves every thing complete, except the vital Senſe and the warm Breath; the whole Soul therefore muſt needs be formed of very ſmall Seeds, as it lies diffuſed through the Veins, the Bowels, and the Nerves; becauſe when it has wholly left every Part of the Body, the outward Shape of the Limbs remains entire, and they want not a Hair of their Weight. And this is the Nature of Wine, when the Flavour of it is gone, and of Ointments, when their ſweet Odours are evaporated into Air. And thus it is, when any Moiſture perſpires through the Pores of the Body, the Bulk does not appear leſs to the Eye, upon that account, nor is there any thing taken off from the Weight; for many and ſmall are the Seeds that compoſe the Moiſture and the Smell in the Contexture of all Bodies: And therefore we may be well aſſured, that the Nature of the Mind and Soul is formed of exceeding little Principles, becauſe when it leaves the Body, it detracts nothing from the Weight.

Yet we are not to ſuppoſe this Nature of the Mind to be ſimple and unmixed; for [1] a thin

[1] He had obſerved, that a Vapour exhales from dying Animals, and that warm too, together with Air intermixed, without which there is generally no Heat; but a dying Perſon expires or breathes out his Soul, therefore that Soul conſiſts of Vapour, Air, and Heat.

Breath

Miſta Vapore, Vapor porro trahit Aëra ſecum;
Nec Calor eſt quiſquam, cui non ſit miſtus & Aër.
Rara quòd ejus enim conſtat natura neceſſe 'ſt
Aëris inter eum primordia multa cieri.
Jam triplex Animi 'ſt igitur natura reperta.
Nec tamen hæc ſat ſunt ad Senſum cuncta creandum:
Nil horum quoniam recipit mens poſſe creare
Senſiferos motus, quædam qui mente volutent.
Quarta quoque his igitur quædam natura neceſſe 'ſt
Attribuatur: (ea 'ſt omninò nominis expers:)
Qua neque mobilius quicquam, neque tenuius extat,
Nec magis è parvis, aut lævibus ex elementis:
Senſiferos motus qui didit prima per artus.
Prima cietur enim parvis perfecta figuris,
Inde Calor motus, & Venti cæca poteſtas
Accipit: inde Aër: inde omnia mobilitantur:
Tum quatitur ſanguis, tum viſcera perſentiſcunt
Omnia; poſtremò datur oſſibus, atque medullis
Sive voluptas eſt, ſive 'ſt contrarius ardor.
Nec temerè huc dolor uſque poteſt penetrare, neque acre
Permanare malum, quin omnia perturbentur:
Uſque adeo ut vitæ deſit locus, atque Animaï
Diffugiant partes per caulas Corporis omneis.
Sed plerumque fit in ſummo quaſi corpore finis
Motibus, hanc ob rem vitam retinere valemus.
Nunc, ea quo pacto inter ſeſe miſta, quibuſque
Compta modis vigeant, rationem reddere aventem

Abſtrahit

Breath mingled with a warm Vapour, forſakes the Bodies of dying Men; and this Vapour draws the Air along with it, for there can be no Heat without Air intermix'd, and Heat being in its Nature rare, muſt needs have ſome Seeds of Air united with it. We find then the Mind conſiſts of three Principles, of Vapour, Air and Heat; yet all theſe are not ſufficient to produce Senſe: For we cannot conceive that either of theſe, or all of them united, can be the Cauſe of ſenſible Motions that may produce Reaſon and Thought.

The Mind conſiſts of four Parts.

And therefore a fourth Nature muſt needs be added to theſe (and This indeed has no Name at all) but nothing can be more apt to move, nothing more ſubtil than it is, nor conſiſt more of ſmall ſmooth Seeds; and this is what firſt raiſes a ſenſible Motion through the Body: This, as it is formed of the minuteſt Particles, is firſt put into Motion, then the Heat, and the unſeen Vapour receive a Motion from it, and then the Air, and ſo all the Limbs are ſet a-going; then is the Blood agitated, and all the Bowels become ſenſible, and laſt of all, Pleaſure or Pain is communicated to the Bones and Marrow. But no Pain or any violent Evil can pierce ſo far without diſordering and ſetting the whole into confuſion, ſo that there is no more Place for Life, and the Parts of the Soul fly away through the Pores of the Body. But this Motion often ſtops upon the Surface of the Body, and then the Soul remains whole, and the Life is preſerved.

[m] Now, how theſe four Principles are mixed, and in what manner they ſubſiſt, I am very deſirous

[m] The *Epicurean* Soul conſiſts of theſe four Things, Heat, Vapour or Wind, Air, and the fourth, ſomething without a Name.

Abstrahit invitum patrii sermonis egestas.
Sed tamen, ut potero summatim attingere, tangam.
Inter enim cursant Primordia principiorum
Motibus inter se, nihil ut secernier unum
Possit; nec spatio fieri divisa potestas:
Sed quasi multæ vis unius corporis extant.
Quod genus in quovis Animantum viscere volgò
Est Odor, & quidam Calor, & Sapor: Et tamen ex his
Omnibus est unum perfectum Corporis augmen.
Sic Calor, atque Aër, & Venti cæca potestas
Mista creant unam naturam, & mobilis illa
Vis, initium motus ab se quæ dividit olis,
Sensifer unde oritur primùm per viscera motus.
Nam penitus prorsum latet Hæc natura, subestque:
Nec magis Hac infra quicquam est in corpore nostro:
Atque Anima 'st Animæ proporro totius ipsa:
Quod genus in nostris membris, & corpore toto
Mista latens Animi vis est, animæque potestas;
Corporibus quia de parvis, pauciſque creata 'st:
Sic tibi nominis Hæc expers Vis, facta minutis
Corporibus latet: Atque Animai totius ipsa
Proporro 'st Anima, & dominatur corpore toto.
Consimili ratione necesse 'st Ventus, & Aër,

Et

rous to explain, but the Poorneſs of the Latin Tongue prevents me, againſt my Will; yet, as far as that permits, I will endeavour briefly to touch upon this Subject. The Seeds then of theſe Principles move ſo confuſedly among themſelves, that no one of them can be ſeparated from another, nor is there any Place ſeverally allotted to each, where any one can act by itſelf; but they are, as it were, many Powers of the ſame Body. As in a Piece of any Animal there is Smell, and Heat, and Taſte, and out of all theſe one perfect Body is compoſed; ſo Heat, and Air, and the inviſible Vapour, and that fourth active Quality, (which is the Principle of Motion to the other three, and from whence all ſenſible Motion riſes through the Limbs) compoſe by their Mixture one moſt ſubtil Subſtance, or one Nature. This fourth Something is deeply fixed in the inmoſt Receſſes of the Body, nor is there any thing in the whole Body more ſecretly and inwardly placed; it is, as it were, the very Soul of the Soul itſelf: For as in the Limbs, and through all the Body, the united Force and Power of the Mind and Soul are hid and unſeen, becauſe they are formed of ſmall and few Seeds, ſo this Something without a Name being compoſed of minute Principles, lies deep and concealed; it is the very Soul of the whole Soul itſelf, and governs the whole Body. By the ſame Rule it is neceſſary that the

Name. They are all blended together, ſo as to compoſe one moſt ſubtil Subſtance, which being diffuſed through the whole Body of the Animal, is contained by and within the Body, and is the Cauſe of its Preſervation; yet they are not all ſeated in the ſame Place. That Part of the Body which is properly called the Mind is placed deepeſt in the inmoſt Receſſes of the Body, and is, as it were, the Foundation of the whole Soul.

Vapour,

Et Calor inter se vigeant commista per artus:
Atque aliis aliud subsit magis, emineatque:
Ut quiddam fieri videatur de omnibus unum:
Ne Calor, ac Ventus seorsum, seorsumque potestas
Aëris interimant sensum, diductaque solvant.
Est etiam Calor ille animo, quem sumit in ira,
Cum ferviscit, & ex oculis micat acribus ardor.
Est & frigida multa comes formidinis Aura:
Quæ ciet horrorem in membris, & concitat artus.
Est etiam quoque pacati status Aëris ille,
Pectore tranquillo qui fit, voltuque sereno.
Sed Calidi plus est illis, quibus acria corda,
Iracundaque mens facilè effervisçit in ira;
Quo genere in primis vis est violenta Leonum:
Pectora qui fremitu rumpunt plerumque gementes,
Nec capere irarum fluctus in pectore possunt.
At Ventosa magis Cervorum frigida mens est,
Et gelidas citiùs per viscera concitat auras:
Quæ tremulum faciunt membris existere motum,
At natura Boum placido magis Aëre vivit,
Nec nimis iraï fax unquam subdita percit
Fumida suffundens cæcæ caliginis umbras;
Nec gelidi torpet telis perfixa pavoris:
Inter utrosque sita 'st, Cervos, sævosque Leones.
Sic Hominum genus est. quamvis Doctrina politos

Constituat

Vapour, the Air, and the Heat be so properly mingled through the Limbs, and be disposed either higher or lower than one another, that one certain Nature may be formed from all; lest the Power of the Heat, the Vapour, and the Air being divided and separately placed, might destroy the Sense, and prevent its Operation.

Heat prevails in the Mind when the Creature is enraged, grows hot, and Fire sparkles from its glowing Eyes. Much Vapour is cold, and the Companion of Fear, it excites Horror in the Body, and shakes the Limbs; but Air is of a calm and mild Quality, it resides in a quiet Breast, and a serene Countenance. But those have most Heat whose Hearts are fierce, and whose angry Mind is soon inflamed into Passion. Of this sort, in the first place, is the distracted Fury of Lions, who roaring, often burst their very Breasts, and are unable to contain the Torrent of Rage that swells within. The cold Temper of the Deer has more of Vapour, and sooner incites a Chillness in the Limbs, which causes a trembling Motion through the whole Body. But the Nature of the Ox consists more of soft Air, nor does the smoaky Firebrand of Anger (that spreads a Shade of black Darkness over the Mind) too much inflame him, nor is he stupified by the Darts of chilling Fear, but his Nature is placed between both, between the fierce Lion and the Deer.

[n] The Mind of Man is formed of the same Principles, tho' the Discipline of Philosophy may

[n] The infinite Variety of Tempers proceeds from the Variety of Mixture that may be made of these three Things, by reason of the different Degrees of each Ingredient; yet a vicious Nature may be greatly corrected by Philosophy, tho' not wholly subdued.

Conſtituat pariter quoſdam, tamen illa relinquit
Naturæ cujuſque Animæ veſtigia prima.
Nec radicitùs evelli mala poſſe putandum 'ſt,
Quin proclivius Hic iras decurrat ad acreis;
Ille metu citiùs paullo tentetur: at Ille
Tertius accipiat quædam clementiùs æquo.
Inque aliis rebus multis differre neceſſe 'ſt
Naturas hominum varias, moreſque ſequaceis:
Quorum ego nunc nequeo cæcas exponere cauſas,
Nec reperire figurarum tot nomina, quot ſunt
Principiis, unde hæc oritur variantia rerum.
Illud in his rebus videor firmare poteſſe,
Uſque adeo Naturarum veſtigia linqui
Parvola, quæ nequeat Ratio depellere dictis:
Ut nihil impediat dignam Diis degere vitam.
Hæc igitur Natura tenetur Corpore ab omni,
Ipſaque corporis eſt cuſtos, & cauſa ſalutis;
Nam communibus inter ſe radicibus hærent:
Nec ſine pernicie divelli poſſe videntur.
Quod genus è Turis glebis evellere Odorem
Haud facile 'ſt, quin intereat natura quoque ejus.
Sic Animi, atque Animæ naturam corpore toto
Extrahere haud facile 'ſt, quin omnia diſſolvantur:
Implexis ita principiis ab origine prima

Inter

poliſh and correct ſome, yet it leaves behind the Marks of the original Nature of the Mind, nor are we to think, that the Seeds of Vice can be wholly rooted out. One Man, we ſee, runs more raſhly into Paſſion, another is more diſpoſed to Fear, and a third is apt to be more merciful than juſt; it is impoſſible but the various Tempers of Mankind, and the Actions that follow them, muſt differ in many other Inſtances, the Reaſons of which are at preſent out of my power to explain; nor can I find Words to expreſs that Variety of Figures by which the Seeds are diſtinguiſhed, and from whence this Variety of Diſpoſition is produced. This however may juſtly be aſſerted on this occaſion, that the Traces of original Nature, which cannot be corrected by the Rules of Reaſon, are ſo very ſmall, that nothing hinders us from leading a Life worthy of the Gods.

° THIS Nature therefore of the Soul is contained by the whole Body; it is the Keeper of the Body, and the Cauſe of its Safety: for they are both united cloſely together by mutual Bonds, nor can they be torn aſunder but by the Deſtruction of both. As it is impoſſible to ſeparate the Odour from a Lump of Frankincenſe, but the Nature of both muſt periſh, ſo it is equally difficult to part the Mind and Soul from the whole Body, but they muſt all be diſſolved. Of ſuch interwoven Principles are they formed

° The *Epicureans* believed an Animal to be as it were a Web in the Loom, that the Body is as the Chain, and the Soul the Woof, ſo that the Intermixture of each with the other compoſes the whole Work; but if either of them be diſſolv'd, the other, and therefore both together, muſt be diſſolved likewiſe.

Inter se fiunt consorti prædita vita:
Nec sine vi quicquam alterius sibi posse videtur
Corporis, atque Animi seorsum sentire potestas:
Sed communibus inter eos conflatur utrinque
Motibus accensus nobis per viscera Sensus.
Præterea, Corpus per se nec gignitur unquam,
Nec crescit, nec post mortem durare videtur.
Non enim ut Humor aquæ dimittit sæpe vaporem,
Qui datus est, neque ab hac causa convellitur ipse,
Sed manet incolumis: non, inquam, sic Animai
Discidium possunt artus perferre relicti:
Sed penitùs pereunt convolsi, conque putrescunt.
Ex ineunte ævo sic Corporis atque Animai
Mutua vitaleis discunt contagia motus,
Maternis etiam in membris, alvoque repôsta;
Discidium ut nequeat fieri sine peste, maloque:
Ut videas, quoniam conjuncta 'st causa salutis,
Conjunctam quoque naturam consistere eorum.
Quod superest, si quis Corpus sentire renutat:
Atque Animam credit permistam Corpore toto
Suscipere hunc motum, quem Sensum nominitamus:
Vel manifestas res contra, verasque repugnat.
Quid sit enim Corpus sentire quis afferet unquam,
Si non ipsa palam quod res dedit ac docuit nos?

from their very Beginning, that they enjoy a common Life, nor have either of them, either the Mind or the Body in a ſeparate State, the Power of Senſe without the Aſſiſtance of each other, but Senſe is incited in us by the Nerves, from the common Motions of both, and by their joint Operations.

Besides, the Body is never born alone, nor does it grow or continue after the Soul is fled; for tho' Water throws off a Vapour when it is made hot, yet it is not by that means deſtroyed, but remains entire: The Limbs, I ſay, cannot with the ſame Safety bear the Separation of the Soul when it retires from them, but thus divided, they muſt all periſh and rot together. For the mutual Conjunction of the Soul and Body from the very Beginning, even as they lie in the Womb of the Mother, does ſo jointly promote the vital Motions, that no Separation can be made without Death and Diſſolution; from hence you learn, that ſince their Preſervation ſo much depends upon each other, their Natures alſo are inſeparably joined and united together.

But further, if any one denies that the Body has Senſe, and believes that the Soul diffuſed through the whole Body is only capable of that Motion we call Senſe, he oppoſes the plaineſt Evidence, and the Truth of all Experience; for who would ever pretend to ſay, that the Body has Senſe, if the Thing itſelf did not fully prove, and convince us of it? [p] But it is plain,

[p] The Reaſon why the Body does not retain the Faculty of Senſe after the Soul is gone, is becauſe that Power and Faculty belong not to the Body alone, but to the Body conjoin'd and united to the Soul.

At dimissa Anima corpus caret undique sensu,
Perdit enim quod non proprium fuit ejus in ævo :
Multaque præterea perdit, cum expellitur ævo :
Dicere porro Oculos nullam rem cernere posse :
Sed per eos Animum ut foribus spectare reclusis,
Desipere 'st, contra cùm sensus dicat eorum :
Sensus enim trahit, atque acies detrudit ad ipsas.
Fulgida præsertim cùm cernere sæpe nequimus,
Lumina luminibus quia nobis præpediuntur :
Quod foribus non fit : neque enim, quâ cernimus ipsi,
Ostia suscipiunt ullum recluſa laborem.
Præterea, si pro Foribus sunt lumina nostra,
Jam magis exemptis Oculis debere videtur
Cernere res Animus sublatis postibus ipsis.
Illud in his rebus nequaquam sumere possis,
Democriti quod sancta viri sententia ponit,
Corporis atque Animi primordia singula primis
Adposita alternis variare, ac nectere membra.
Nam cùm multò sunt Animaï elementa minora,
Quàm quibus è Corpus nobis & Viscera constant,
Tum numero quoque concedunt, & rara per artus

Dissita

you'll ſay, that the Body is void of all Senſe when the Soul is gone: True, for this Faculty is not peculiar to the Body alone, but to the Soul and Body united; and we know the Senſe becomes weaker, and decays as the Body and Soul grow old together.

To ſay likewiſe, that the Eyes can ſee nothing of themſelves, but the Mind looks through them as through Doors laid open, this is ridiculous, when Senſe itſelf tells them the contrary, and ſets it full in their View; eſpecially when we are unable to look upon Objects that dazzle the Eyes, becauſe our Sight is confounded by too great a Luſtre. This could not be, if they were mere Doors, nor are open Doors that we look through capable of Pain. Beſides, if our Eyes were no more than Doors, the Mind would ſee clearer when the Eyes were pulled out, and the whole Frame taken away.

In this Caſe it is in vain to take ſhelter under the ſacred Opinion of [q] *Democritus*, who ſays, that as many Parts as there are of the Body, ſo many Parts too of the Soul are anſwerable, and are contained in them; for ſince the Principles of the Soul are not only much ſmaller than thoſe of which the Body and its Parts conſiſt, but are fewer in Number, and are ſpread thinly in di-

[q] It was the Opinion of the Philoſopher *Democritus*, that the Soul has as many Parts as the Body, but were this true, we ſhould feel every thing that touch'd any Part of the Body; for when any Particle of the Body, and the Part of the Soul that is joined to it come to be moved, why ſhould not Senſe ariſe from that Motion? But there are many Things, he obſerves, which we do not perceive when they touch us; therefore they miſtake who join a Part of the Soul to every Part of the Body.

Dissita sunt, duntaxat ut hoc promittere possis,
Quantula prima queant nobis injecta ciere
Corpora sensiferos motus in Corpore, tanta
Intervalla tenere exordia prima Animaï.
Nam neque Pulveris interdum sentimus adhæsum
Corpore, nec membris incussam insidere Cretam,
Nec Nebulam noctu, nec Aranei tenuia fila
Obvia sentimus, quando obretimur euntes:
Nec supra caput ejusdem cecidisse vietam
Vestem, nec Plumas avium, Papposque volanteis,
Qui nimia levitate cadunt plerumque gravatim:
Nec repentis itum cujusviscunque Animantis
Sentimus, nec priva pedum vestigia quæque,
Corpore quæ in nostro Culices, & cætera ponunt.
Usque adeo priùs est in nobis multa ciendum
Semina, corporibus nostris immista per artus,
Quàm primordia sentiscant concussa Animaï,
Et quàm intervallis tantis tuditantia possint
Concursare, coire, & dissultare vicissim.
Et magis est Animus vitaï claustra coërcens,
Et dominantior ad vitam, quàm vis Animaï.
Nam sine Mente, Animoque nequit residere per artus
Temporis exiguam partem pars ulla Animaï:
Sed comes insequitur facilè, & discedit in auras;
Et gelidos artus in lethi frigore linquit.

At

ſtant Spaces over all the Limbs, you may affirm ſo far, that the Principles of the Soul take up only ſo many different Spaces and Intervals, as may be ſufficient for thoſe little Seeds that are in us to incite thoſe Motions that produce Senſation. That this Senſe does not affect every minute Part of the Body is plain; for we ſeldom feel the Duſt that ſticks upon us, nor the Particles of Chalk that drop upon our Limbs; nor do we perceive the Dew by Night, or the fine Threads of the Spider meeting us, when we are intangled by the ſubtle Net as we paſs along; nor the decaying Web lighting upon our Heads, nor are we ſenſible of the ſoft Feathers of Birds, nor of the flying Down of Thiſtles, which from their natural Levity are ſcarce able to deſcend upon us; nor do we feel the Motion of every creeping Inſect, nor the little Traces of the Feet which Gnats and ſuch Animals make upon us. So that the many Seeds which are diffuſed over all the Limbs, muſt be firſt put into motion before the Principles of the Soul are agitated and made capable to feel, and before its Seeds, by ſtriking upon each other through ſo many diſtant Spaces, can meet, unite, and part again, and be ſo variouſly moved as to produce Senſe and Perception in us.

BUT the *Mind* it is that keeps up the Defences of Life, and has a more ſovereign Power to preſerve our Beings, than all the Faculties of the Soul; for, without the Mind, the leaſt Part of the Soul cannot ſecure its Reſidence in the Body for a Moment, but follows it readily as a cloſe Companion, and vaniſhes into Air along with it, and leaves the cold Limbs in the frozen Arms of Death. But the Man, whoſe Mind is whole and

At manet in vita, cui Mens Animusque remansit,
Quamvis est circum-cæsis lacer undique membris:
Truncus, ademta Anima circum, membrisque remotis,
Vivit, & ætherias vitaleis succipit auras:
Si non omnimodis, at magna parte Animaï
Privatus, tamen in vita cunctatur, & hæret.
Ut lacerato Oculo circum si Pupula mansit
Incolumis, stat cernendi vivata potestas;
Dummodo ne totum corrumpas luminis orbem,
Sed circumcidas aciem, solumque relinquas:
Id quoque enim sine pernicie confiet eorum,
At si tantula pars Oculi media illa peresa 'st,
Incolumis quamvis alioqui splendidus orbis,
Occidit extemplo lumen, tenebræque sequuntur:
Hoc Anima atque Animus vincti sunt fœdere semper.
Nunc age, nativos animantibus, & mortaleis,
Esse Animos, Animasque leveis ut noscere possis;
Conquisita diu, dulcique reperta labore
Digna tua pergam disponere carmina vita.
Tu fac utrumque uno subjungas nomen eorum,
Atque Animam, verbi causa, cùm dicere pergam,
Mortalem esse docens; Animum quoque dicere credas:
Quatinus est unum inter se, conjunctaque res est.
Principio, quoniam tenuem constare minutis
Corporibus docui, multòque minoribus esse
Principiis factam, quàm liquidus humor Aquaï 'st.
Aut Nebula, aut Fumus: Nam longè mobilitate
Præstat, & à tenui causa magis icta movetur;
Quippe ubi Imaginibus Fumi, Nebulæque movetur:
Quod genus in somnis sopiti ubi cernimus alta

and entire, remains alive, tho' he be mangled and all his Limbs lopt off; yet his Trunk, tho' his Soul be so far gone, and his Members separated from him, still lives and breathes the vital Air; the Trunk, if not spoil'd of the whole, yet of a great Part of the Soul, still continues alive, and holds fast its Being. So, if you tear the Eye all round, if the Pupil remains safe, the Power of Sight continues entire, so long as you do no injury to the Apple, but cut the White all round, and leave that whole, this may be done without any Danger or Loss to the Sight; but if ever so little of the middle of the Eye be prick'd through, tho' the Ball otherwise looks bright and sound, the Light instantly dies away, and Darkness follows. This is the Case of the Mind and Soul, and by such Bonds are they always held together.

And now, for your sake, my *Memmius*, and to let you know that the Mind and Soul are born in us and die with us, I will go on to write Lines worthy of thy Genius, and which I have been long preparing, and have at last by sweet Labour happily perfected. Observe only that you apply both Names indifferently, or, more plainly, when I offer to say the Soul is mortal, you are to understand I mean the Mind likewise, since they are both so united together, that in this respect they make but one and the same Thing.

First then, since I have proved that the Soul consists of very minute Seeds, and is formed of Principles much less than clear Water, or Mist, or Smoke, because it is more apt to move, and is set a-going by a much lighter Stroke (for it is moved by the very Images of Mist and Smoke) as when, by Sleep o'ercome, in Dreams we see

the

Exhalare vapore altaria, ferreque Fumum:
Nam procul hæc dubio nobis Simulacra geruntur:
Nunc igitur quoniam quaſſatis undique vaſis
Diffluere Humorem, & Laticem diſcedere cernis:
Et Nebula ac Fumus quoniam diſcedit in auras:
Crede Animam quoque diffundi, multòque perire
Ociùs, & citiùs diſſolvi corpora prima,
Cùm ſemel omnibus è membris ablata receſſit.
Quippe etenim Corpus, quod vas quaſi conſtitit ejus,
Cùm cohibere nequit conquaſſatum ex aliqua re,
Ac rarefactum detracto ſanguine venis,
Aëre qui credas poſſe hanc cohiberier ullo?
Corpore quî noſtro rarus magis an cohibeſſit?
Præterea, gigni pariter cum Corpore, & una
Creſcere ſentimus, pariterque ſeneſcere Mentem.
Nam velut infirmo Pueri, teneroque vagantur
Corpore; ſic Animi ſequitur ſententia tenuis.
Inde ubi robuſtis adolevit viribus ætas:
Conſilium quoque majus, & auctior eſt Animi vis:
Poſt ubi jam validis quaſſatu'ſt viribus ævi
Corpus; & obtuſis ceciderunt viribus artus:
Claudicat Ingenium, delirat Linguaque, Menſque,
Omnia deficiunt, atque uno tempore deſunt.
Ergo diſſolvi quoque convenit omnem Animaï
Naturam, ceu fumus in altas aëris auras:
Quandoquidem gigni pariter, pariterque videmus
Creſcere, & (ut docui) ſimul ævo feſſa fatiſcit.

the lofty Altars exhale a Vapour, and ſend up Smoke into the Air, the Images of theſe Things no doubt produce theſe Phantaſms in us. And ſince you ſee, when the Veſſel is broken to pieces, the Water breaks looſe and flows away in a Stream; and ſince Miſt and Smoke vaniſh into Air, conclude the Soul likewiſe to be poured out, and that its Principles much ſooner periſh, and its Seeds are more eaſily diſſolved, when it is ſeparated and retires from all the Limbs; for ſince the Body, which is as it were a Veſſel to it, when it is bruiſed to pieces by any outward Force, or rarefied by the Blood being drawn out of the Veins, cannot keep it in [r], how can you ſuppoſe it can be contain'd by ſubtil Air? How can that which is more rare than this Body of our's preſerve it entire?

Besides, we perceive the Soul is born with the Body, grows up with it, and both wax old together. For as Children are of a weak and tender Body, their Mind likewiſe is of the ſame frail Complexion. As their Age improves, and their Strength is more confirmed, their Judgment ripens more, and the Powers of their Mind are more enlarged. But when the Body is ſhaken by the irreſiſtible Stroke of Time, and the Limbs fail without Strength, the Underſtanding grows lame, the Tongue and the Mind loſe their Vigour, all the Faculties fail, and go away together. The whole Nature of the Soul therefore muſt needs be diſſolv'd, and ſcatter'd like Smoke into the Air, ſince we ſee it is born with the Body, increaſes together with it, and with it, as I ſaid before, becomes feeble by Age, and decays.

[r] It is in vain to ſay, that when the Soul is diſſolved from the Body it remains entire in the Air; for how can the ſubtil Air preſerve that ſafe, which often exhales through the Pores of a thick Body?

Huc accedit, uti videamus Corpus ut ipſum
Suſcipere immaneis morbos, durumque dolorem;
Sic Animum curas acreis, luctumque, metumque,
Quare participem lethi quoque convenit eſſe:
Quinetiam Morbis in Corporis avius errat
Sæpe animus, dementit enim; deliraque fatur:
Interdumque gravi Lethargo fertur in altum,
Æternumque ſoporem, oculis, nutuque cadenti:
Unde neque exaudit voces, neque noſcere vultus
Illorum potis eſt, ad vitam qui revocantes
Circumſtant lachrymis rorantes ora, genaſque.
Quare Animum quoque diſſolvi fateare neceſſe 'ſt,
Quandoquidem penetrant in eum contagia morbi:
Nam Dolor, ac Morbus lethi fabricator uterque 'ſt,
Multorum exitio perdocti quod ſumus antè.
Denique cur, hominem cùm Vini vis penetravit
Acris, & in venas diſceſſit diditus ardor,
Conſequitur gravitas Membrorum? præpediuntur
Crura vacillanti? tardeſcit Lingua? madet Mens?
Nant oculi? Clamor, Singultus, Jurgia gliſcunt?
Et jam cætera de genere hoc quæcunque ſequuntur?
Cur ea ſunt, niſi quòd vehemens violentia Vini
Conturbare Animam conſuevit Corpore in ipſo?
At quæcunque queunt conturbari, inque pediri,
Significant, (paullò ſi durior inſinuârit
Cauſa) fore ut pereant, ævo privata futuro.
Quinetiam, ſubita vi morbi ſæpe coactus
Ante oculos aliquis noſtros, ut fulminis ictu,

Concidit,

Add to this, that as the Body is ſubject to violent Diſeaſes and tormenting Pains, ſo the Mind is affected by ſharp Cares, by Griefs and Fear, and therefore muſt equally partake of Death and Diſſolution with it. And then, in great Diſorders of the Body, the Mind frequently grows mad, raves, and talks wildly; ſometimes it is ſunk into a profound and never-ending Sleep by a heavy Lethargy, the Eyes ſhut, and the Head nodding, ſo that it neither hears the Words, nor is able to diſtinguiſh the Face of thoſe who ſtand about bedewing their Cheeks with Tears, and ſtriving to recall the departing Breath. Wherefore you muſt needs allow that the Mind may be diſſolved, ſince the Infection of the Diſeaſe pierces through it; for Grief and Diſeaſes are both the Cauſes of Death, as we are taught by Experienee in a thouſand Inſtances.

And again, why is it, when the quick Force of Wine ſtrikes through a Man, and the inſinuating Heat works in all his Veins, why follows a Heavineſs of the Limbs? The Legs no longer ſupport the reeling Body, the Tongue faulters, the Mind is drowned, the Eyes ſwim; Noiſe, Hiccups, Brawlings deafen your Ears, and many other Evils, the Conſequence of ſuch Debauches; how could this be, did not the impetuous Force of the Wine diſtract the Soul as it lies diffuſed through the Body? Now whatever can be thus diſturb'd, and hinder'd in its Operations, would (were the Force to grow more violent) be deſtroy'd and utterly deprived of future Being.

Besides, a Perſon ſurprized with a ſudden Fit of a Diſeaſe, drops down before our Eyes as if he were thunder-ſtruck. He foams, he groans and trembles

Concidit, & ſpumas agit, ingemit, & tremit artus,
Deſipit, extentat nervos, torquetur, anhelat,
Inconſtanter & in jactando membra fatigat:
Nimirum, quia vis Morbi diſtracta per artus
Turbat agens Animum, ſpumans ut in æquore ſalſo
Ventorum validis ferveſcit viribus Unda.
Exprimitur porro Gemitus, quia membra dolore
Afficiuntur; & omnino quòd ſemina vocis
Ejiciuntur, & ore foras glomerata feruntur,
Quà quaſi conſuerunt, & ſunt minuta viaï.
Deſipientia fit, quia vis Animi, atque Animaï
Conturbatur, & (ut docui) diviſa ſeorſum
Disjectatur, eodem illo diſtracta veneno.
Inde, ubi jam Morbi ſe flexit cauſa, reditque
In latebras ater corrupti Corporis humor,
Tum quaſi talipedans primùm conſurgit; & omneis
Paullatim redit in ſenſus, animamque receptat.
Hæc igitur tantis ubi morbis Corpore in ipſo
Jactetur, miſeriſque modis diſtracta laboret:
Cur eandem credis ſine Corpore in Aëre aperto
Cum validis ventis ætatem degere poſſe?
Et quoniam Mentem ſanari, Corpus ut ægrum,
Cernimus, & flecti medicina poſſe videmus;
Id quoque præſagit mortalem vivere Mentem:
Addere enim parteis, aut ordine trajicere æquum 'ſt,
Aut aliud prorſum de ſumma detrahere illum,
Commutare Animum quicunque adoritur, & inſit;
Aut Aliam quamvis naturam flectere quærit:
At neque transferri ſibi parteis, nec tribui vult,
Immortale quod eſt quicquam, neque defluere hilum.

Nam

trembles all over, he is distracted, stretches his Nerves, is distorted; he pants, he tosses and tires his Limbs with strange and unnatural Postures: The Reason is, because the Force of the Disease, driven violently through the Limbs, agitates and disturbs the Mind, as the foaming Waves of the Sea are enraged by the strong Blast of Winds. And then Groans are forced from the Wretch, because the Limbs are tormented with Pain, and the Seeds of the Voice are thrown out from the Bottom of the Breast, and hurried in confusion, without any distinct Accent through the Mouth. The Man raves, because the Powers of the Mind and Soul are distracted, and their Principles, as I said, broken, disjoin'd, and divided by the Violence of the Distemper. But when the Cause of the Disease gives way, and the black Humour of the corrupt Body retires into some convenient Vessel, then the Patient begins to rise, feeble and staggering; and by degrees returns to all his Senses, and recovers Life. Since therefore this Soul is so tossed about with such strange Disorders, and labours with such Agonies in so miserable a manner, as it is inclosed in the Body, how do you think it can subsist without the Body in the open Air, and exposed for ever to the raging Fury of all the Winds?

And since we see the Mind can be made sound, and be affected by the Powers of Medicine, as well as a disorder'd Body, this is a strong Evidence that the Mind is mortal; for whoever attempts to make any Alteration in the Mind, or offers to change the Nature of any other Thing, must either add some new Parts to it, or take off some of the old, or else transpose the former Order and Situation; but what is immortal can have

Nam quodcunque ſuis mutatum finibus exit,
Continuò hoc mors eſt illius quod fuit ante.
Ergo Animus ſive ægreſcit, mortalia ſigna
Mittit (uti docui) ſeu flectitur à medicina:
Uſque adeo falſæ rationi vera videtur
Res occurrere, & effugium præcludere eunti:
Ancipitique refutatu convincere falſum.
Denique ſæpe hominem paullatim cernimus ire,
Et membratim vitalem deperdere ſenſum:
In pedibus primùm Digitos liveſcere, & Ungueis,
Inde Pedes, & Crura mori: Poſt inde per artus
Ire alios tractim gelidi veſtigia lethi:
Scinditur atqui Animæ quoniam natura, nec uno
Tempore ſincera exiſtit, mortalis habenda 'ſt.
Quòd ſi forte putas ipſam ſe poſſe per artus
Introrſum trahere, & parteis conducere in unum,
Atque ideo cunctis ſenſum deducere membris:
At locus ille tamen, quò copia tanta Animaï
Cogitur, in ſenſu debet majore videri.
Qui quoniam nuſquam 'ſt, nimirum, (ut diximus ante)
Dilaniata foras diſpergitur; interit ergo.
Quinetiam, ſi jam libeat concedere falſum,
Et dare, poſſe Animam glomerari in Corpore eorum,
Lumina qui linquunt moribundi particulatim:
Mortalem tamen eſſe Animam fateare neceſſe 'ſt.

Nothing added to it, or taken from it, nor will admit of any Change in the Order of its Parts: for whatever is ſo alter'd as to leave the Limits of its firſt Nature, is no more what it was, but inſtantly dies. The Mind therefore, whether it be diſtemper'd, or reliev'd by Medicine, ſhews (as I obſerv'd) ſtrong Symptoms of its Mortality. So evidently does the true Matter of Fact overthrow all falſe Reaſoning, that there is no Poſſibility to eſcape its Force; and the contrary Opinion is either way fully refuted.

Besides, we often ſee Men periſh by degrees, and loſe their vital Senſe Limb by Limb; firſt, the Nails and Toes grow black, then the Feet and Legs rot; at length the Traces of cold Death proceed on, ſtep by ſtep, over the other Parts of the Body. Since therefore the Soul is divided, and does not at ſuch a time continue whole and entire, you muſt pronounce it mortal. But if you think the Soul retires out of the dying Members into the more inward Parts of the Body, and contracts its Seeds into one Place, and ſo withdraws the Senſe from the reſt of the Limbs, yet that Place to which the Soul retreats, and where ſo much of it is crouded together, ought to enjoy a more lively and briſker Senſe; but, ſince there is no ſuch Place, 'tis plain, as we ſaid before, it is ſcattered piece-meal through the Air, and therefore periſhes. But ſuppoſe we grant, which is falſe in itſelf, and allow that the Soul may be huddled up together in the Bodies of thoſe who die one Limb after another, yet then the Soul muſt be confeſſed to be by Nature mortal. [s] For

[s] The Reaſons he gives for the Soul's Mortality are very intelligible, tho' far from being concluſive; he means here, that what decays and loſes its Nature by being thus contracted and huddled up, is as much mortal as that which is thus diſperſed and is torn to pieces in the Air.

Nec refert, utrum pereat dispersa per auras,
An contractis in se partibus obbrutescat:
Quando Hominem totum magis, ac magis undique sensus
Deficit, & vitæ minus, & minus undique restat.
Et quoniam Mens est Hominis pars una, locoque
Fixa manet certo, velut Aures, atque Oculi sunt,
Atque alii sensus, qui vitam cunque gubernant:
Et veluti Manus, atque Oculus, Naresve seorsum
Secreta à nobis nequeant sentire, neque esse:
Sed tamen in parvo linquuntur tempore tali.
Sic Animus per se non quit sine corpore, & ipso
Esse Homine, illius quasi quod Vas esse videtur:
Sive aliud quidvis potis es conjunctius eij
Fingere, quandoquidem connexus corpori adhæret.
Denique Corporis, atque Animi vivata potestas
Inter se conjuncta valent, vitaque fruuntur.
Nec sine Corpore enim vitaleis edere motus
Sola potest Animi per se natura, nec autem
Cassum Anima Corpus durare, & sensibus uti:
Scilicet, avolsus radicitùs ut nequit ullam
Dispicere ipse Oculus rem seorsum Corpore toto:
Sic Anima atque Animus per se nil posse videntur:
Nimirum, quia per venas & viscera mistim
Per nervos, atque ossa tenentur corpore ab omni.
Nec magnis intervallis Primordia possunt
Libera dissultare, ideo concluſa moventur
Sensiferos motus; quos extra corpus in auras
Aëris haud possunt post mortem ejecta moveri:
Propterea quia non simili ratione tenentur.

it ſignifies not whether the Soul dies ſcattered through the Air, or periſhes with its Parts contracted into one Place, while the Senſes ſteal away from the whole Body more and more, and the Powers of Life by degrees appear leſs and leſs.

And ſince the Mind is a Part of Man fixed in one certain Place, as the Ears, Eyes, and other Senſes that preſide over Life, and as the Hands, and Eyes, and Noſe, when ſeparated from the Body, are incapable of Senſe, or even to Be, but muſt in a very ſhort time corrupt and putrify; ſo the Mind cannot ſubſiſt of itſelf without the Body, (or even Be in the Man) which is as it were a Veſſel to the Soul, or any thing elſe you can conceive more cloſely united to it; for it ſticks inſeparably to the Body, and cannot be divided from it.

Further, the vital Powers of the Body and Mind exert themſelves together, and live united by the ſtrongeſt Bonds; neither can the Nature of the Mind alone diſpenſe the vital Motions of itſelf without the Body, nor can the Body, void of Soul, continue or uſe the Faculties of Senſe: For as the Eye, torn out by the Roots and ſeparated from the Body, can ſee nothing, ſo the Soul and Mind cannot act of themſelves, becauſe they are ſpread over all the Body by the Veins, the Bowels, the Nerves and Bones. Nor could the Seeds of the Soul exerciſe thoſe Vibrations that produce Senſe, were they diſpoſed at wide Intervals, and incloſed by no ſolid Body; they ſhew thoſe ſenſible Motions becauſe they are ſhut up cloſe, which they cannot exert when they are forced out of the Body into the wide Air after Death, becauſe they are not under the ſame Re-

Corpus enim atque animans erit Aër, ſi cohibere,
Seſe Anima, atque in eo poterit concludere motus,
Quos ante in Nervis, & in ipſo Corpore agebat.
Quare etiam atque etiam reſoluto Corporis omni
Tegmine, & ejectis extra vitalibus auris,
Diſſolvi ſenſus Animi fateare neceſſe 'ſt,
Atque Animam, quoniam conjuncta eſt cauſa duobus.
Denique cùm Corpus nequeat perferre Animaï
Diſcidium, quin id tetro tabeſcat odore:
Quid dubitas, quin ex imo, penituſque coorta
Emanârit, uti Fumus, diffuſa Animæ vis?
Atque ideo tanta mutatum putre ruina
Conciderit Corpus penitus, quia mota loco ſunt
Fundamenta foras animæ; manantque per artus,
Perque viarum omnes flexus, in corpore qui ſunt,
Atque foramina? Multimodis ut noſcere poſſis
Diſpertitam Animæ naturam exiſſe per artus:
Et priùs eſſe ſibi diſtractam Corpore in ipſo,
Quàm prolapſa foras enaret in Aëris Auras?
Quinetiam, fineis dum vitæ vertitur intra,
Sæpe aliqua tamen è cauſa labefacta videtur
Ire Anima, & toto ſolvi de corpore membra:
Et quaſi ſupremo langueſcere tempore voltus,
Molliaque exangui cadere omnia Corpore membra:
Quod genus eſt, Animo male factum cum perhibetur,
Aut Animam liquiſſe, ubi jam trepidatur, & omnes
Extremum cupiunt vires reprendere vinclum.
Conquaſſatur enim tum Mens, Animæque poteſtas
Omnis: & hæc ipſo cum Corpore conlabefiunt:

ſtraint as they are within the Incloſure of the Body; for the Air would be an Animal, if the Soul could be confined within it, and maintain thoſe Motions of Senſe which before it exerciſed in the Nerves and through the Limbs. You muſt confeſs therefore, over and over, that the Mind and Soul (for they both make up but one Subſtance) muſt needs be diſſolv'd, as ſoon as they are ſtripped of the Covering of the Body, and their vital Powers thrown out into the thin Air.

AGAIN, ſince the Body cannot bear the Separation of the Soul, but it ſoon putrifies and ſtinks, how can you doubt but that the Principles of the Soul diffuſed through the whole Body, and raiſed from the very inmoſt Parts of it, flow out like Smoke; and therefore the rotten Body thus changed falls to pieces in ſo ruinous a manner, becauſe the Seeds of the Soul, which preſerved the whole, are moved widely from their Place, and flow through the Limbs, and all the winding Paſſages of the Body. And hence you are fully ſatisfied, that the Nature of the Soul is ſpread over all the Limbs, and is firſt broken and divided in the Body itſelf, before it flies out into the Air abroad.

NAY more, whilſt the Man is ſtill living, the Soul ſeems often to receive a violent Shock, ſo that the Limbs are diſſolving all over, the Face looking pale, as if it were real Death, and all the Members of the Body wan and ghaſtly, falling to pieces. This happens in a ſwooning Fit, when the Soul is going, and trembles upon the Verge of Life, and all the Faculties ſtrive to hold faſt the Chain that binds up Soul and Body together. The Mind and all the Powers of the Soul are then ſhaken, and are ſo ſtagger'd with the Body, that a Force

Ut gravior paullo possit dissolvere causa.
Quid dubitas, tandem quin extra prodita corpus
Imbecilla foras, in aperto, tegmine dempto,
Non modò non omnem possit durare per ævum,
Sed minimum quodvis nequeat consistere tempus?
Nec sibi enim quisquam moriens sentire videtur
Ire foras Animam incolumem de Corpore toto,
Nec priùs ad jugulum, & superas succedere fauceis:
Verùm deficere in certa regione locatam:
Ut sensus alios in parti quemque sua scit
Dissolvi: Quòd si immortalis nostra foret Mens:
Non jam se moriens dissolvi conquereretur:
Sed magis ire foras, vestemque relinquere, ut Anguis,
Gauderet, prælonga senex aut cornua Cervus.
Denique cur Animi nunquam mens consiliumque
Gignitur in Capite, aut Pedibus, Manibusve; sed unis
Sedibus, & certis regionibus omnis inhæret:
Si non certa loca ad nascendum reddita cuique
Sunt: & ubi quicquid possit durare creatum:
Atque ita multimodis pro totis artubus esse,
Membrorum ut nunquam existat præposterus ordo?
Usque adeo sequitur res rem, neque Flamma crearii in
Fluminibus solita 'st, neque in Igni gignier Algor.

Præterea,

a little ſtronger would drive it to utter Diſſolution.

Do you doubt now, whether this Soul thrown out of the Body, abroad, deſtitute, into the open Air, ſtript naked, be ſo far from remaining entire to eternal Ages, that it cannot ſubſiſt ſo much as for the leaſt moment?

And then, no dying Man ever perceived his Soul go out whole from all Parts of the Body at once, nor felt it firſt creeping up his Throat, and then riſing up to his Jaws; but he finds it fail in that Part of the Body wherein it is placed, as he knows that every Senſe expires in its proper Organ. But if this Mind were immortal, it would not, when dying, complain of its being diſſolv'd, but rather rejoice that it was going freely abroad, that it had thrown off his Coat as a Snake, or as an old Stag that caſts his heavy Antlars.

And why is not the [t] Mind, with all its Reaſon and Conduct, produced in the Head, the Feet, the Hands, but that every Part is fixed to one Place, and to a certain Situation? If proper Places were not appointed to all Beings in which to be born, and when produced where they might abide, and where every Member might be ſo conveniently diſpoſed, that there might be no prepoſterous Order of the Limbs throughout the whole? So regularly does one thing follow another, that Fire is never raiſed from Water, nor Cold from Heat.

[t] The Mind is confined to the Heart, and he that looks for Souls in the Air, may as reaſonably expect to find Flames in Water, and Ice in Fire; for all natural Things have certain and fixed Places to be born and live in.

Besides,

Præterea, si immortalis natura Animaï 'st,
Et sentire potest secreta à Corpore nostro :
Quinque (ut opinor) eam faciendum 'st Sensibus auctam :
Nec ratione alia nosmet proponere nobis
Possumus infernas Animas Acherunte vagare.
Pictores itaque, & Scriptorum sæcla priora
Sic Animas introduxerunt sensibus auctas.
At neque seorsum Oculi, neque Nares, nec Manus ipsa
Esse potest Anima, neque seorsum Lingua, nec Aures
Absque anima per se possunt sentire, nec esse.
Et quoniam toto sentimus Corpore inesse
Vitalem sensum, & totum esse animale videmus,
Si subitò medium celeri præciderit ictu
Vis aliqua, ut seorsum partem secernat utramque :
Dispertita procul dubio quoque vis Animaï,
Et discissa simul cum Corpore disjicietur :
At quod scinditur, & parteis discedit in ullas,
Scilicet æternam sibi naturam abnuit esse.
Falciferos memorant currus abscindere membra
Sæpe ita de subitò permista cæde calenteis,
Ut tremere in terra videatur ab artibus id quod
Decidit abscissum : Cùm Mens tamen, atque hominis vis
Mobilitate mali non quit sentire dolorem :
Et simul in pugnæ studio quod dedita Mens est,

Corpore

Besides, if the Nature of the Soul be immortal, and enjoys the Power of Senſe when ſeparated from the Body, you muſt, as I conceive, ſupply her with the Uſe of the five Senſes, nor can we imagine how without them the Soul can live in the Shades below. [u] The Painters and the Poets, many Ages ago, have repreſented the Souls indued with Senſe; but neither Eyes nor Noſe, nor Hands, nor Tongue, nor Ears can be ſeparately in the Soul, nor can they ſeparately retain any Senſe, nor even Be without it.

And ſince the vital Senſe, we perceive, [x] is diffuſed through the Body, and we ſee the whole Body animated throughout, if any Weapon cuts it in two in the middle with a ſudden Stroke, and divides the Parts aſunder, the Powers of the Soul, without doubt, being ſeparated and diſunited, will follow the Fate of the Body; but whatever is cut aſunder, and falls into Parts, can have nothing immortal in its Nature. Chariots, we read, armed with Scythes, and reeking with confuſed Slaughter, would cut off a Limb with ſo quick a Force, that the divided Part that fell off from the Body, might be ſeen trembling upon the Ground, when the Mind and Heart of the Man feel nothing of the Pain, ſo ſudden was the Wound. His whole Soul is ſo taken up with the Heat of Action; that he purſues the Fight,

[u] He derides the Fables of the Ancients concerning the Souls of Men, which, as they feigned, went into Hell after Death, where they enjoyed all their Senſes as when they were alive.

[x] The Soul being diffuſed through the whole Body, muſt of neceſſity be divided, if the Body be cut in two by a violent and ſudden Stroke: If the Limb of a Soldier be cut off by an armed Chariot, the Motion of the diſſected Part is a Proof that the Soul is divided likewiſe.

and

Corpore cum reliquo pugnam, cædeisque petissit :
Nec tenet, amissam lævam cum tegmine sæpe
Inter equos abstraxe rotas, falceisque rapaceis :
Nec cecidisse alius dextram, cùm scandit, & instat.
Inde alius conatur adempto surgere crure,
Cùm digitos agitat propter moribundus humi pes :
Et caput abscissum calido, viventeque trunco,
Servat humi voltum vitalem, oculosque patenteis,
Donec relliquias Animaï reddidit omneis.
Quin etiam tibi si lingua vibrante minantis
Serpentis caudam procero corpore, utrinque
Sit libitum in multas parteis discindere ferro ;
Omnia jam seorsum cernes amcisa recenti
Volnere tortari, & terram conspergere tabo,
Ipsam seque retrò partem petere ore priorem,
Volneris ardenti ut morsu premat icta dolore.
Omnibus esse igitur totas dicemus in illis
Particulis Animas? At ea ratione sequetur,
Unam animantem Animas habuisse in Corpore multas.
Ergo divisa 'st ea, quæ fuit una simul cum
Corpore, quapropter Mortale utrumque putandum 'st
In multas quoniam parteis discinditur æquè.
Præterea, si immortalis natura Animaï
Constat, & in Corpus nascentibus insinuatur :
Cur super anteactam ætatem meminisse nequimus ?
Nec vestigia gestarum rerum ulla tenemus ?
Nam si tantopere 'st Animi mutata potestas,
Omnis ut actarum exciderit retinentia rerum :

Non

and the intended Slaughter, with the Remainder of his Body; nor does he imagine that the Wheels and mangling Hooks have torn off among the Horſes his Left-hand, or that he has loſt his Shield. Another knows nothing that his Right-hand is lopt off, as he ſcales the Wall, and preſſes eagerly forward. Another attempts to riſe with one Leg, while the dying Foot moves the Toes as it lies by him upon the Ground; and the Head cut off, the Trunk yet warm and heaving, preſerves the ſame fierce Look in the Face, and keeps the Eyes open, till it has loſt all Remains of the Soul within it. And ſo, divide with a Sword, if you pleaſe, into many Parts, the Tail of a long Snake, threatening, and brandiſhing his Tongue, you'll ſee every divided Part wriggling with the freſh Wound, and ſtaining the Ground with Blood. You'll perceive the Serpent turning his Head about to find his divided Body, and bite it with his Teeth, from the ſore Anguiſh of the Pain he ſuffers. Shall we ſay, that a proper Soul belongs ſeverally to all theſe Parts? By this Rule it will follow, that the ſame Creature is animated by many Souls at the ſame time. 'Tis plain therefore, the Soul that before was one, and diffuſed through the whole Body, is divided, and conſequently they are both mortal, becauſe they are both equally divided into many Parts.

Further, if the Nature of the Soul be immortal, and is infuſed into the Body when a Child is born, why do we remember nothing of the Life we led before? nor retain any Traces of Things done long ago? For if the Power of the Soul be ſo utterly changed, that all Recollection of paſt Actions is entirely gone, this kind of Oblivion is

Non (ut opinor) id ab letho jam longiter errat.
Quapropter fateare neceſſe 'ſt, quæ fuit ante,
Interiiſſe : Et quæ nunc eſt, nunc eſſe creatam.
Præterea, ſi jam perfecto corpore nobis
Inferri ſolita 'ſt Animi vivata poteſtas,
Tum cùm gignimur, & vitæ cùm limen inimus :
Haud ita conveniebat, uti cum Corpore, & unà
Cum membris videatur in ipſo ſanguine crêſſe :
Sed velut in cavea, per ſe ſibi vivere ſolam
Convenit, ut ſenſu Corpus tamen affluat Omne.
Quare etiam atque etiam nec originis eſſe putandum 'ſt
Experteis Animas, nec lethi lege ſolutas.
Nam neque tantopere adnecti potuiſſe putandum 'ſt
Corporibus noſtris extrinſecus inſinuatas :
Quod fieri totum contrà manifeſta docet res.
Namque ita connexa 'ſt per Venas, Viſcera, Nervos,
Oſſaque, uti Dentes quoque ſenſu participentur :
Morbus ut indicat, & gelidaï ſtringor aquaï,
Et lapis oppreſſus ſub dente è frugibus aſper :
Nec tam contextæ cùm ſint, exire videntur
Incolumes poſſe, & ſalvas exſolvere ſeſe
Omnibus è Nervis, atque Oſſibus, Articuliſque.
Quòd ſi fortè putas extrinſecus inſinuatam

Permanare

(I think) not far removed from Death itſelf. We muſt needs allow therefore, that the Soul that was before utterly periſhed, and that which now is was newly created.

But, when the Body is completely formed, when we are born, and enter within the Door of Life [y], if then the vital Power of the Soul were infuſed, it would have nothing to do to grow up together with the Body and the Limbs, and be united with the very Blood, but, as it were in a Cage, it would live entire of itſelf, and ſo diffuſe the Faculties of Senſe through all the Body. Again then and again it muſt be ſaid, that the Soul is neither without Beginning, nor exempt from the Laws of Death; for we cannot conceive that the Soul, were it infuſed from without into the Body, could be ſo nicely and cloſely united to the ſeveral Parts of it, as the Thing itſelf evidently proves ſhe is. She is indeed ſo diffuſed through the Veins, the Bowels, the Nerves, and Bones, that even the Teeth are not without Senſe. This appears from the acute Pain we feel from the Chillneſs of cold Water, or the grinding of a rough Stone when we eat. The Soul therefore being ſo cloſely connected with the ſeveral Parts, cannot be ſuppoſed to depart whole, or deliver herſelf entire from the Bones and Nerves, and Joints of the Body.

[z] But if you think the Soul is infuſed from

[y] If the Soul were infuſed into a perfect Body, it ought to have been done in ſuch a manner that it might be in that Body like a Bird in a Cage, not as it now is when it ſeems to grow, and be ſo much of a piece with it, that it cannot be ſafe and whole out of it.

[z] Let us grant, ſays the Poet, that the Soul is firſt formed, and infuſed afterwards, yet it muſt of neceſſity ſuffer Change, as it paſſes thro' all the different Mazes and Pores of the Body, and conſequently is mortal.

without,

Permanare Animam nobis per membra solere,
Tanto quæque magis cum corpore fusa peribit;
Quod permanat enim, dissolvitur: Interit ergo.
Dispertitur enim per caulas Corporis omneis:
Ut cibus in membra atque artus cùm diditur omneis,
Disperit, atque aliam naturam sufficit ex se:
Sic Anima atque Animus quamvis integra recens in
Corpus eunt, tamen in manando dissolvuntur;
Dum quasi per caulas omneis diduntur in artus
Particulæ, quibus hæc Animi natura creatur:
Quæ nunc in nostro dominatur Corpore nata
Ex illa, quæ tunc peritat partita per artus.
Quapropter neque natali privata videtur
Esse die natura Animæ, neque funeris expers.
Semina præterea linquuntur, necne, Animaï
Corpore in exanimo? quod si linquuntur, & insunt,
Haud erit, ut meritò immortalis possit haberi;
Partibus amissis quoniam libata recessit.
Sin ita sinceris membris ablata profugit,
Ut nullas parteis in Corpore liquerit ex se:
Unde cadavera rancenti jam viscere vermeis
Expirant? atque unde animantum copia tanta
Exos, & exsanguis tumidos perfluctuat artus?
Quòd si forte Animas extrinsecut insinuari
Vermibus, & privas in corpora posse venire
Credis, nec reputas cur millia multa Animarum
Conveniant, unde una recesserit: Hoc tamen est ut
Quærendum videatur, & in discrimen agendum:
Utrùm tandem Animæ venentur semina quæque

Vermiculorum,

without, and so spread over all the Limbs, she is for this reason still more liable to perish with the Body; for a Thing that flows through so many Passages is dissolved, and therefore dies, for she must be thus divided through all the Pores: And as the Food, when it is distributed through the Members and the Limbs, loses its first Form, and takes up another quite different, so the Soul, tho' it enters whole and fresh into the Body, yet, in passing through, its Parts are dissolved, because the Particles of which the Soul is formed must be diffused through all the Pores into all the Body; and that Soul which now rules and governs the Body, is produced from that which perished, and was dissolved in passing through into the Limbs. The Nature of the Soul therefore is neither without Beginning, nor free from Death and Dissolution.

Besides, in a dead Body some Particles of the Soul remain, or they do not. If they do remain and abide in it, you can by no means properly say she is immortal, because she withdrew with her Seeds divided, and with some of them left behind. But if she retired from the Body with all her Parts whole, and left none of her Seeds behind, how comes the Carcass to breed so many Worms in the corrupted Bowels? And whence do such Abundance of Creatures without Bones and Blood swarm over the bloated Limbs? But if you fancy that Souls formed without creep into these Worms, and every single Worm has a particular Soul, nor think it strange that so many thousand Souls should flow together from without, to the Place from whence one departed, yet it is proper to enquire and to examine into This, Whether every particular Soul searches into the

Vermiculorum, ipſæque ſibi fabricentur ubi ſint:
An jam corporibus perfectis inſinuentur.
At neque, cur faciant ipſæ, quareve laborent,
Dicere ſuppeditat, neque enim, ſine corpore cùm ſint,
Sollicitæ volitant morbis, algoque, fameque.
Corpus enim magis his vitiis adfine laborat:
Et mala multa Animus contage fungitur ejus.
Sed tamen his eſto quamvis facere utile Corpus,
Cùm ſubeant: At qua poſſint, via nulla videtur.
Haud igitur faciunt Animæ ſibi corpora, & artus.
Nec tamen eſt ut jam perfectis inſinuentur
Corporibus: Neque enim poterunt ſubtiliter eſſe
Connexæ; neque conſenſu contagia fient.
Denique cur acris violentia triſte Leonum
Seminium ſequitur: Dolus Volpibus, & fuga Cervis
A patribus datur, & patrius pavor incitat artus?
Et jam cætera de genere hoc, cur omnia membris

Ex

ſeveral Seeds of the Worms, and chooſes for it ſelf what Seeds are moſt proper to make itſelf a Body, or whether ſhe enters into a Body already formed. But there is no Reaſon to be given why ſhe ſhould build a Dwelling for herſelf, and go through ſuch Fatigue; eſpecially ſince, diſintangled from Matter, ſhe cannot be tormented with Diſeaſes, with Cold and Hunger; for Body only can labour under theſe Calamities, and the Soul ſuffers many ſuch Diſtreſſes only by her Conjunction with it. But allow it convenient for Souls to faſhion out Bodies for themſelves to dwell in, yet there is no way poſſible for them to do this. They do not therefore make up Bodies and Limbs for themſelves, nor are they infuſed into Bodies ready made; for they could not be ſo nicely united as to inform every Part of the Body, nor could the vital Motions be mutually carried on between them.

No Tranſmigration.

Besides, [a] Why does fierce Rage affect the ſullen Breed of Lions? Why is Craft derived to the Fox, and Flight to Stags from their Sires, and Paternal Fear gives Wings to all their Limbs? Whence come other Paſſions of this kind? Why

[a] Here he attacks the Doctrine of *Pythagoras* and *Plato*: If theſe immortal Souls, ſays he, had ſo often been ſhifted out of one Animal into the Body of another, the natural Diſpoſitions of the Animals would by little and little have been altered and changed; which we ſee they are not, but continue the ſame: If you ſay, that of whatever kinds the Souls are, they change their Nature, and put on the Manners that agree with the Bodies into which they enter; he anſwers, whatever can be changed is mortal. If it be pretended, that Human Souls paſs into Human Bodies, why does that Soul that behaved wiſe in the Body of a Man at full Age, play the fool as it does when infuſed into the Body of a Child? Does the Mind grow weak in a weak Body? If it does, it is changed; and a Thing ſo frequently changed cannot be immortal.

Ex ineunte ævo ingeneraſcunt, inque genuntur,
Si non certa ſuo quia ſemina ſeminioque
Vis Animi pariter creſcit cum corpore toto?
Quòd ſi immortalis foret, & mutare ſoleret
Corpora, permiſtis animantes moribus eſſent:
Effugeret Canis Hyrcano de ſemine ſæpe
Cornigeri incurſum Cervi, tremeretque per auras
Aëris Accipiter fugiens veniente Columba:
Deſiperent Homines, ſaperent fera ſæcla Ferarum.
Illud enim falſa fertur ratione, quod aiunt,
Immortalem Animam mutato Corpore flecti:
Quod mutatur enim, diſſolvitur: Interit ergo.
Trajiciuntur enim partes, atque ordine migrant.
Quare diſſolvi quoque debent poſſe per artus,
Denique ut intereant unà cum Corpore cunctæ.
Sin Animas hominum dicent in Corpora ſemper
Ire humana, tamen quæram cur è ſapienti
Stulta queat fieri, nec prudens ſit puer ullus?
Nec tam doctus equæ pullus, quàm fortis equi vis?
Si non certa ſuo quia ſemine, ſeminioque
Vis Animi pariter creſcit cum Corpore toto.
Scilicet in tenero teneraſcere Corpore Mentem
Confugient; quod ſi jam ſit, fateare neceſſe 'ſt,
Mortalem eſſe Animam, quoniam mutata per artus
Tantopere amittit vitam, ſenſumque priorem.

Quove

do they belong to all Creatures from their tender Age, and ſeem born with them, if the peculiar Powers of the Soul were not produced from peculiar Seeds in every particular kind, and did not they grow up together with the whole Body? But were the Soul immortal and uſed to change her Body, Creatures would be ſtrangely confuſed in their Diſpoſitions and Qualities; the fierce Dog of *Hircanian* Breed would fly the Attack of the horned Stagg, and the fearful Hawk would tremble in the Air at the Approach of the Dove; Men would be void of Reaſon like Brutes, and the ſavage Race of Beaſts might become Philoſophers.

But what is ſaid in this Caſe is ſupported by falſe Reaſoning; that the immortal Soul is changed according to the different Body it is united with; for what is changed is diſſolved, and therefore dies; the Parts are tranſpoſed, and vary in their Situation. It follows therefore, that the Principles of it may be diſſolved through the Limbs, and may all periſh together with the Body. But they cry, that the Souls alway paſs into Bodies of the ſame kind, the Souls of Men into the Bodies of Men; then I would aſk why a Soul from being wiſe ſhould become a Fool, and a Child is not made a Privy Counſellor? and why a young Colt has not the Paces of a full-grown Horſe? If the peculiar Powers of the Soul were not produced from peculiar Seeds in every particular kind, and did they not grow up together with the whole Body? They'll ſay perhaps, that the Mind becomes equally weak in a tender Body; if ſo, they muſt allow the Soul to be mortal, becauſe, when infuſed into the Body it is ſo much changed, it loſes the Life and Senſe it enjoyed before.

Quove modo poterit pariter cum Corpore quoque
Confirmata cupitum ætatis tangere florem
Vis Animi, nisi erit consors in origine prima?
Quidve foras sibi vult membris exire senectis?
An metuit concluſa manere in Corpore putri?
Et domus ætatis spatio ne fessa vetusto
Obruat? At non sunt Immortali ulla pericla.
Denique connubia ad Veneris, partusque ferarum
Esse Animas præsto, deridiculum esse videtur:
Et spectare immortaleis mortalia membra
Innumero numero, certareque præproperanter
Inter se quæ prima, potissimaque insinuetur:
Si non fortè ita sunt Animarum fœdera pacta,
Ut, quæ prima volans advenerit, insinuetur
Prima, neque inter se contendant viribus hilum.
Denique in æthere non Arbor, non æquore in alto
Nubes esse queunt, nec Pisces vivere in arvis,
Nec Cruor in lignis, nec saxis Succus ineſſe.
Certum ac dispositum 'st, ubi quicquid crescat, & insit:
Sic Animi natura nequit sine Corpore oriri
Sola, neque à nervis, & sanguine longiùs esse.
Hoc si posset enim, multò priùs ipsa Animi vis
In Capite, aut Humeris, aut imis Calcibus esse
Posset, & innasci quavis in parte soleret:
Tandem in eodem homine, atque in eodem vase maneret.

Quod

And why ſhould the Powers of the Soul deſire paſſionately to grow and attain to a full Maturity of Age together with the Body, if it were not a Companion with it from the very Beginning? And why is ſhe fond of flying away out of old decayed Limbs? Is ſhe afraid of being confined a cloſe Priſoner in a rotten Body, and leſt her old Tabernacle, worn out by Time and Age, ſhould fall and cruſh her to pieces? But no Danger can affect a Nature that is immortal.

Besides, it is ridiculous to ſuppoſe, that a Flock of Souls are ready hovering about, whilſt Brutes are in the Act of Luſt, and drop their Young, that they, immortal as they are, ſhould attend upon periſhing Bodies, in Troops without Number, hurrying and coming to Blows as it were, which firſt ſhould get poſſeſſion and enter in; unleſs perhaps they rather chooſe to agree among themſelves, that the firſt come ſhould be firſt ſerved, and there ſhould be no further Diſpute about it.

Again, there are no Trees in the Sky, no Clouds can be in the deep Sea, nor can Fiſh live in the Fields, nor can there be Blood in Wood, nor Moiſture in Stones. It is fixed and eſtabliſhed where every thing ſhould grow and ſubſiſt. The Soul therefore cannot come into Being alone without the Body, nor can ſhe exiſt ſeparately without the Nerves and the Blood; if this could be, the Powers of the Soul, you would rather feel ſometimes in the Head or Shoulders, or even in the very Bottom of the Feet, or in any other Part of the Body, and ſo you would perceive it diffuſing itſelf through the whole Body; as Water poured into a Veſſel firſt covers one Part, then ſpreads over the whole. Since there-

Quod quoniam in noſtro quoque conſtat Corpore certum
Diſpoſitumque videtur, ubi eſſe, & creſcere poſſit
Seorſum Anima, atque Animus: Tanto magis inficiandum
Totum poſſe extra Corpus durare, genique.
Quare, corpus ubi interiit, periiſſe neceſſe 'ſt
Confiteare animam diſtractam in Corpore toto.
Quippe etenim Mortale Æterno jungere, & unà
Conſentire putare, & fungi mutua poſſe,
Deſipere 'ſt: quid enim diverſius eſſe putandum 'ſt,
Aut magis inter ſe disjunctum, diſcrepitanſque,
Quàm, Mortale quod eſt, Immortali, atque perenni
Junctum, in concilio ſævas tolerare procellas?
Præterea, quæcunque manent Æterna, neceſſe 'ſt,
Aut quia ſunt Solido cum corpore reſpuere ictus,
Nec penetrare pati ſibi quicquam, quod queat arctas
Diſſociare intus parteis; ut Materiaï
Corpora ſunt, quorum naturam oſtendimus ante;
Aut ideo durare ætatem poſſe per omnem,
Plagarum quia ſunt expertia, ſicut Inane 'ſt;
Quod manet intactum, neque ab ictu fungitur hilum:
Aut ideo, quia nulla loci ſit copia circum,
Quò quaſi res poſſint diſcedere, diſſoluïque:
Sicut Summarum Summa 'ſt æterna, neque extra
Quis locus eſt, quò diffugiat: neque corpora ſunt, quæ
Poſſint incidere, & valida diſſolvere plaga:

fore there is a proper and determinate Place in this Body of ours, for the Mind and Soul distinctly to Be and increase in, we have the more reason to deny that they can continue or be born without it; and consequently when the Body dies, the Soul diffused through the whole Body must be allowed to die likewise.

And then to join a mortal Nature to an immortal, and to think they can agree together, and mutually unite in their Operations, is Folly and Nonsense; for what can be conceived more absurd, what can be more impracticable in itself, more disagreeing to Reason, than a mortal Nature joined to one eternal and immortal, and so united as to be liable to all the Pains and Distresses of Human Life?

Besides, [b] whatever is immortal must be so, either because it is solid, and cannot be affected by Blows, so that nothing can pierce it, and break through the close Union of its Parts, (such are the first Seeds of Matter, as we proved before;) or it is eternal, and lasts for ever, because it is free from Stroke, as a Void is, which is not liable to Touch, nor affected by the Force of Blows; or lastly, because there is no Space any way about it into which its broken Parts can be dispersed, (in this Sense the Universe is eternal, beyond which there is no Place where its Parts may retire, nor any Bodies to fall upon it, and dissolve and break it to pieces by mighty Blows

[b] Whatever is immortal is so, either by reason of its Solidity as an Atom, or because it is free from Stroke, as the Void, or because there is no Place out of which or from whence any Bodies can come to dash it to pieces, or into which its dissolved or broken Parts can retire, as the Universe; but the Soul is nothing like any of these; it is composed of Seeds, and therefore not perfectly solid; it is not a Void, because it affects the Body, and in its turn is affected by it; and it is not the Universe, therefore it is mortal.

from

At neque (uti docui) Solido cum corpore Mentis
Natura 'ſt, quoniam admiſtum 'ſt in rebus Inane;
Nec tamen eſt ut Inane: neque autem corpora deſunt,
Ex infinito quæ poſſint fortè coorta
Proruere hanc Mentis violento turbine molem,
Aut aliam quamvis cladem importare pericli:
Nec porro natura Loci, ſpatiumque Profundi
Deficit, exſpergi quò poſſit vis Animaï,
Aut alia quavis poſſit vi pulſa perire:
Haud igitur lethi præcluſa 'ſt janua Menti.
Quòd ſi fortè ideo magis immortalis habenda 'ſt,
Quòd lethalibus ab rebus munita tenetur;
Aut quia non veniunt omnino aliena ſalutis:
Aut quia quæ veniunt, aliqua ratione recedunt
Pulſa priùs, quàm, quid noceant, ſentire queamus:
Scilicet à vera longè ratione remotum 'ſt.
Præter enim quàm quòd morbis tum Corporis ægrit,
Advenit id, quod eam de rebus ſæpe futuris
Macerat, inque metu malè habet, curiſque fatigat:
Præteritiſque admiſſa annis peccata remordent.
Adde furorem Animi proprium, atque oblivia rerum,
Adde quòd in nigras Lethargi mergitur undas.
Nil igitur Mors eſt, ad nos neque pertinet hilum,
Quandoquidem natura Animi mortalis habetur:
Et velut anteacto nil tempore ſenſimus ægri,
Ad confligendum venientibus undique Pœnis;

Omnia

from without.) But, as I said, the Nature of the Mind is not solid, because there is empty Space in all compound Beings; nor yet is it a Void, nor are there wanting Bodies for ever beating upon it from without, and driving the whole Frame of this Mind by impetuous Force into utter Dissolution, or to distress it any other way with extremest Danger; nor is there any Want of Place or Space where the Seeds of the Soul may be dispersed, or where they may be dissolved by any Violence whatsoever. The Gate of Death therefore is not barred against the Soul.

But if you think she may the rather be pronounced immortal, because she is placed secure from Things that may destroy her Being, or that Things opposite to her Safety never come near her, or if they do, they are diverted by some Cause, before you perceive they have done her any signal Injury; this is a great Mistake, and far from Truth: For, not to mention how she sickens with the Diseases of the Body, how something happens that torments her about future Events, how she is disorder'd by Fear, and vexed by Cares, and how the Conscience of Crimes past many Years ago, pierces her through; consider the peculiar Distraction that affects the Mind, how she forgets every thing, and is overwhelmed by the black Waves of a Lethargy.

Against the Fear of Death.

Death therefore is Nothing, nor is it of the Consequence of a Rush to us, since the Nature of the Soul is certainly mortal; and as we were no way concerned at what formerly happened when the [c] *Carthaginians* muster'd their Armies on all sides

[c] As the *Carthaginians* Wars gave us no Trouble who were not born in those Days, so, since the Soul is mortal as well as the Body, no Wars, Cares or Afflictions will torment us after Death.

Omnia cum belli trepido concussa tumultu
Horrida contremuere sub altis ætheris auris ;
In dubioque fuit sub utrorum regna cadendum
Omnibus humanis esset, terraque marique :
Sic ubi nonerimus, cùm Corporis, atque Animaï
Discidium fuerit, quibus è sumus uniter apti,
Scilicet haud Nobis quicquam, qui non erimus tum,
Accidere omnino poterit, sensumque movere :
Non si terra mari miscebitur, & mare cælo.
Et si jam nostro sentit de Corpore, postquàm
Distracta 'st Animi natura, Animæque potestas :
Nil tamen hoc ad Nos, qui cætu, conjugioque
Corporis, atque Animæ consistimus uniter apti.
Nec, si materiam nostram conlegerit ætas
Post obitum, rursumque redegerit, ut sita nunc est ;
Atque iterum Nobis fuerint data lumina vitæ,
Pertineat quicquam tamen ad Nos id quoque factum,
Interrupta semel cùm fit repetentia nostra.
Et nunc nil ad Nos de nobis attinet, antè
Qui fuimus, nec jam de illis Nos afficit angor,
Quos de materia nostra nova proferet ætas :
Nam cùm respicias immensi temporis omne
Præteritum spatium, tum motus Materiaï
Multimodi quàm sint ; facile hoc adcedere possis,
Semina sæpe in eodem, ut nunc sunt, ordine posta:
Nec memori tamen id quimus deprendere mente.
Inter enim jecta 'st vitaï pausa, vagéque
Deerrârunt passim motus ab Sensibus omnes :

Debet

againſt us, and all the World trembled, and ſhook with the dreadful Alarms of War, and it was undecided under the Power of which Empire the Land and the Sea, and all Things here below ſhould be ſubjected; ſo, when we ſhall be no more, when the Separation happens between the Soul and the Body, which together make up our Being, Nothing ſhall befall us who then ſhall no where be, nor affect our Senſe; not tho' the Earth be ſwallowed up by the Sea, and the Sea confounded with the Heavens above.

But if the Nature of the Soul, and the Powers of it, when divided from the Body, had the Faculty to think, this would ſignify nothing to us, who are formed and compounded by a ſtrict and inſeparable Union of Soul and Body together.

Nay, if Time could collect together our ſcatter'd Particles after Death, and reduce them into the ſame Frame they are now in, and the Light of Life were again beſtowed upon us, can all this, if it were done, relate any thing to us, when all the Memory of paſt Life were interrupted and gone? And now we give ourſelves no Trouble about what we were formerly, nor are we under any Anxiety what Perſons the Time to come will raiſe from our Matter, when it is moulded up again; for when you look back upon that infinite Space of Time that is paſt, and conſider how various are the Agitations of Matter, you will eaſily believe thoſe Seeds of ours have been often ranged in the ſame Order they are now in, tho' we can recollect nothing of what was then tranſacted; for a Pauſe of Life is thrown in between, and the Seeds, ſo variouſly toſſed about, took ſuch Motions as were averſe and oppoſite to all Senſe.

For

Debet enim, miserè quoi fortè ægrèque futurum 'st,
Ipse quoque esse in eo tum tempore, cùm malè possit
Accidere: At quoniam mors eximit im, prohibetque,
Illum, cui possint incommoda conciliari
Hæc eadem, in quibus & nunc Nos sumus, antè fuisse;
Scire licet Nobis nihil esse in morte timendum:
Nec miserum fieri, qui non est, posse: neque hilum
Differre, an nullo fuerit jam tempore natus,
Mortalem vitam mors cui immortalis ademit.
Proinde ubi se videas hominem miserarier, ipsum,
Post mortem fore, ut aut putrescat corpore pôsto;
Aut flammis interfiat, malisve ferarum:
Scire licet, non sincerum sonere, atque subesse
Cæcum aliquem cordi stimulum, quamvis neget ipse
Credere se quemquam sibi Sensum in morte futurum.
Non (ut opinor) enim dat, quod promittit; & inde
Nec radicitus è vita Se tollit, & eicit;
Sed facit esse Sui quiddam super inscius ipse.
Vivus enim Sibi cùm proponit quisque, futurum
Corpus uti volucres lacerent in morte feræque;
Ipse Sui miseret: neque enim Se vindicat hilum,
Nec removet satis à projecto corpore: & illud
Se fingit, sensuque suo contaminat adstans.
Hinc indignatur se Mortalem esse creatum,
Nec videt, in vera nullum fore morte alium Se;
Qui possit vivus sibi Se lugere peremptum,
Stansque jacentem, nec lacerari, urive dolore.
Nam si in morte malum 'st malis morsuque ferarum

Tractari,

For whoever is to become wretched and miſerable, muſt exiſt at that very Time when ſuch Misfortunes are to fall upon him; but ſince Death puts an end to his Being, and hinders the Man from feeling thoſe Misfortunes which we the Living endure, it is plain that we have nothing to fear in Death, and none can be unhappy who are not in Being; nor is it of the Conſequence of This, whether ſuch a one had ever been born, whoſe mortal Life immortal Death had once put an end to.

And then, when you ſee a Man lament himſelf, becauſe his rotten Body ſhall after Death putrefy in the Earth, or be conſumed by Fire, or by the Jaws of wild Beaſts, this Man you muſt obſerve does not ſpeak out, but has ſome ſecret Sting concealed at his Heart within, tho' he pretends to ſay that the Body has no Senſe after Death; for I think he does not come up to his Word, nor believes that the Whole of him is deprived of Life when he dies, but, like a Fool, that ſomething of himſelf remains ſtill. When a Man alive torments himſelf, that Birds or Beaſts will tear his Body to pieces after Death, he bemoans the Miſery of his Fate, but does not fully diſtinguiſh, nor ſet himſelf at a proper Diſtance from his dead Carcaſe, he believes himſelf to be That, and rots with all his Senſes about him. Hence it is he grieves that he was born mortal, nor ſees that in Death there can be no other Self that can ſurvive, and mourn over him after he is dead, that can ſtand by him as he lies along, or ſuffer Pain or Affliction for him.

For if it be an Evil to be cruſhed after Death by the Teeth and Jaws of wild Beaſts, I [d] do not

[d] He alludes to three different Ways of Sepulture in uſe by the Ancients; ſome were burnt, ſome buried in the Earth, and ſome were put into Stone-Coffins filled up with Honey.

ſee

Tractari, non invenio quî non sit acerbum
Ignibus impositum calidis torrescere flammis;
Aut in melle situm suffocari, atque rigere
Frigore, cùm in summo gelidi cubat æquore saxi:
Urgerive superne obtritum pondere terræ.
At jam non domus accipiet te læta, neque uxor
Optima, nec dulces occurrent oscula nati
Præripere, & tacita pectus dulcedine tangent;
Non poteris factis tibi fortibus esse, tuisque
Præsidio: Miser! ô miser! aiunt, omnia ademit
Una dies infesta tibi tot præmia vitæ.
Illud in his rebus non addunt, Nec tibi earum
Jam desiderium insidet rerum insuper unâ.
Quod benè si videant animo, dictisque sequantur:
Dissolvant animi magno se angore, metuque.
Tu quidem ut es letho sopitus, sic eris ævi
Quod supereſt, cunctis privatu' doloribus ægris:
At nos horrifico cinefactum te propè busto
Insatiabiliter deflebimus, æternumque
Nulla dies nobis mœrorem è pectore demet.
Illud ab hoc igitur quærendum 'st, quid sit amari
Tantopere, ad somnum si res redit, atque quietem,
Cur quisquam æterno possit tabescere luctu?
Hoc etiam faciunt, ubi discubuere, tenentque
Pocula sæpe homines, & inumbrant ora coronis,

ſee why his Fate is not equally wretched to be laid upon a burning Pile, and conſumed to aſhes, or to be ſuffocated with Honey, or to be ſtiff with Cold, as he lies upon the Top of a bleak Rock, or preſſed with a heavy Weight of Earth upon him.

But now no more will your glad Family welcome you home, nor your beſt of Wives, nor ſweet Children run to meet you, and ſtrive who firſt ſhall have a Kiſs, and make your Heart leap with ſilent Delight; no more ſhall you be a Defence to yourſelf and Friends by your brave Exploits: Ah Wretch, thou crieſt, Ah miſerable Me! One woeful Day has robbed me of ſo many Bleſſings of my Life. But, in this Caſe, he never goes on and ſays, that the Deſire of theſe Things is gone likewiſe. If Men would well conſider, and accordingly expreſs their Complaints, their Minds would be free from much Anxiety and imaginary Fear; for Thou ſleeping in the Arms of Death, ſhalt lie for ever diſcharged from all Sorrow and Pain, but we ſhall never ceaſe to lament Thee, reduced to Aſhes, near thy ſad Urn, and no Time ſhall remove our never-ending Grief from our Minds. Now I would gladly know if the matter be no more than ſleeping and going to Reſt, what there is ſo exceeding bitter in Death, that any one ſhould upon that account pine his Life away in eternal Lamentation?

And yet This the gayeſt Part of Mankind do, even when they ſit down at their Carouſals, with Bumpers in their Hands, and their [e] Heads

[e] It was the Cuſtom among the *Greeks* and *Latins*, at their Feaſts and Entertainments, for the Gueſts, and even the Waiters to wear Garlands of Flowers upon their Heads. This they did, ſays *Pliny*, to diſpel by the Fragrancy of the Flowers the Vapours and Heavineſs that proceeded from too much Drinking.

Ex animo ut dicant, Brevis hic eſt fructus homullis:
Jam fuerit, neque poſt unquam revocare licebit.
Tanquam in morte mali cumprimis hoc ſit eorum
Quòd ſitis exurat Miſeros, atque arida torreat,
Aut aliæ cujus deſiderium inſideat rei.
Nec ſibi enim quiſquam tum Se, Vitamque requirit,
Cum pariter Mens & Corpus ſopita quieſcunt:
(Nam licet æternum per nos ſic eſſe ſoporem.)
Nec deſiderium noſtri nos adtigit ullum:
Et tamen haudquaquam noſtros tunc illa per artus
Longè ab ſenſiferis Primordia motibus errant:
Quin conreptus homo ex ſomno ſe conligit ipſe.
Multò igitur mortem minùs ad Nos eſſe putandum,
Si minùs eſſe poteſt, quàm quod nihil eſſe videmus.
Major enim turbæ disjectus Materiaï
Conſequitur letho, nec quiſquam expergitus exſtat,
Frigida quem ſemel eſt vitaï pauſa ſecuta.
Denique ſi vocem rerum Natura repente
Mittat, & hoc aliquoi noſtrum ſic increpet ipſa:
Quid tibi tantopere 'ſt, Mortalis, quòd nimis ægris
Luctibus indulges? quid mortem congemis, ac fles?
Nam ſi grata fuit tibi vita anteacta, priorque,
Et non omnia pertuſum congeſta quaſi in vas
Commoda perfluxere, atque ingrata interiere:
Cur non, ut plenus vitæ Conviva, recedis?
Æquo animoque capis ſecuram, Stulte, quietem?
Sin ea, quæ fructus cumque es, periere profuſa,
Vitaque in offenſu 'ſt; cur amplius addere quæris,

Rurſum

crowned with Flowers; they turn ſerious and cry, Short is the Pleaſure of us poor Creatures, we can juſt ſay it was, and once gone, it will never return more. As if the greateſt Evil in Death to them was, that a parching Thirſt ſhould ſcorch the Wretches, and burn them up, or an inſatiable Deſire of any thing they love ſhould follow them beyond the Grave. No Man gives himſelf any Concern about himſelf or his Life, when the Soul and Body are ſleeping at Reſt together (tho' we were to ſleep ſo eternally) no Appetite for any thing we love beſt would then affect us; and yet then the Principles of the Soul are alive, and are moved almoſt with a ſenſible Motion within us, the Man rouſed from his Sleep ſoon recollects and recovers himſelf; Death therefore, we ſhould imagine, would give us much leſs Anxiety than Sleep, if there can be leſs than what ſeems nothing at all; for there is in Death a wider Separation of the Seeds, nor does the Man ever wake, when once the cold Pauſe of Life comes upon him.

A Proſopopœia *of Nature.*

BUT if *the Nature of Things* ſhould offer to ſpeak of a ſudden, and upbraid the Folly of any one of us in a manner like this: Prythee, Man, why is it that thou indulgeſt thy ſelf in ſuch ſharp Sorrow and Complaints? Why doſt thou groan and weep becauſe thou ſhalt die? If your Life paſt has been agreeable to you, and all the abundant Delights of it did not paſs your Mind as through a Sieve, and periſhed without Pleaſure to you, why do not you, as a Gueſt plentifully regaled with Life, take your leave; and, fond Fool! enjoy your ſweet Repoſe with a chearful Mind? But if the good Things thou haſt received have been idly ſquandered and are gone, and Life is grown a Burden to you, why do you covet more, that may come to the ſame unhappy End, and vainly die away

Rursum quod pereat malè, & ingratum occidat omne :
Nec potiùs vitæ finem facis, atque laboris ?
Nam tibi præterea quod machiner, inveniamque
Quod placeat, nihil est : eadem sunt omnia semper.
Si tibi non annis Corpus jam marcet, & artus
Confecti languent : eadem tamen omnia restant,
Omnia si pergas vivendo vincere sæcla :
Atque etiam potiùs, si nunquam sis moriturus.
Quid respondeamus, nisi justam intendere litem
Naturam ? & veram verbis exponere causam ?
At qui obitum lamentetur miser ampliùs æquo,
Non meritò inclamet magis, & voce increpet acri?
Aufer ab hinc lacrymas, Barathro, & compesce querelas.
Grandior hic verò si jam, Seniorque queratur :
Omnia perfructus vitaï præmia, marces ?
Sed quia semper aves, quod abest, præsentia temnis,
Imperfecta tibi elapsa 'st, ingrataque vita,
Et nec-opinanti Mors ad caput adstitit antè
Quàm satur, ac plenus possis discedere rerum.
Nunc aliena tua tamen ætate omnia mitte,
Æquo animoque, agedum, jam aliis concede : necesse 'st.
Jure (ut opinor) agat, jure increpet, incilietque,
Cedit enim rerum novitate extrusa vetustas ;
Semper & ex aliis aliud reparare necesse 'st :
Nec quidquam in barathrum, nec tartara decidit atra.
Materies opus est, ut crescant postera sæcla:
Quæ tamen omnia Te vita perfuncta sequentur.

Nec

like thoſe that were before; and not rather put a period to thy Life and all thy Cares? For there is nothing further I can contrive or invent that can pleaſe thee more. Things always continue the ſame; if thy Body was not to decay by Years, nor thy Limbs grow feeble by Age, Things will ever remain the ſame, tho' thou wert to go on and live for ever, and much more ſo if thou wert never to die. What could we ſay but that *Nature* gave a very juſt Reproof, and ſet the Caſe in a very proper Light?

But the Wretch that deplores his Death beyond all Bounds, may not She deſervedly cry out the louder upon ſuch a one, and chide him in a ſharper Note, Get thee gone with thy Tears, thou Booby, and leave ſobbing. If he be an old Fellow, and far advanced that complains, Doſt thou fret thy ſelf that haſt run through all the Delights of Life? Becauſe thou art reaching after abſent Pleaſures, thou deſpiſeſt the preſent, and ſo thy Life paſſes away imperfect, and without reliſh, and Death ſtares thee in the Face before thou art aware, before thou haſt enough, and canſt go off the Stage ſatisfied and full of Joy. It is high time to take thy leave of every thing that does not agree with thy Age; come, make way cheerfully for others, there is no help for it: I think *Nature*, upon ſuch occaſions, would act juſtly, and, by ſuch a Rebuke, uſe him as he deſerves; for old Things muſt be thruſt off, and give way as new come, and one thing muſt needs be repaired by another; but nothing ſinks into Hell, or deſcends into the dark Shades. There muſt ſtill be a Stock of Matter to produce future Generations, all which likewiſe, when their Race is run, ſhall follow thee; nor did Things leſs

Nec minùs ergo ante hæc, quàm nunc, cecidere, cadentque:
Sic alid ex alio nunquam desistet oriri,
Vitaque mancupio nulli datur, omnibus usu.
Respice item quàm nihil ad Nos anteacta vetustas
Temporis æterni fuerit, quàm nascimur antè.
Hoc igitur speculum nobis Natura futuri
Temporis exponit post mortem denique nostram:
Num quid ibi horribile apparet? num triste videtur
Quicquam? nonne omni somno securius exstat?
Atque ea nimirum, quæcunque Acherunte profundo
Prodita sunt esse, in vita sunt omnia nobis.
Nec miser impendens magnum timet aëre saxum
Tantalus, ut fama 'st, cassa formidine torpens:
Sed magis in vita Divûm metus urget inanis
Mortaleis, casumque timent, quemcunque ferat Fors.
Nec Tityon Volucres ineunt Acherunte jacentem,
Nec, quod sub magno scrutentur pectore, quidquam
Perpetuam ætatem poterunt reperire profecto,
Quamlibet immani projectu Corporis exstet,
Qui non sola novem dispensis jugera membris
Obtineat, sed qui Terraï totius orbem:
Non tamen æternum poterit perferre dolorem,
Nec præbere cibum proprio de corpore semper:

Sed

paſs away in the Ages before than they do now, and ſo ſhall they do for the Ages to come; for Beings never ceaſe to riſe from the Ruins of one another, and Life was given to none for a Property, but to all for Uſe.

Look back then, how that infinite Tract of Time that vaniſhed before we were in Being, how it has no Relation to us; and the Nature of the Time to come will be of the ſame Concern to us after we are dead. And now does any thing ſhew dreadful in Death? Has it any thing melancholy in its Appearance? Is it not more ſerene than the ſofteſt Sleep?

And truly, all thoſe dreadful Things that are ſaid to be in the Shades below, are all felt by us whilſt we are in this Life; nor is there, as they tell us, ſuch a miſerable Wretch, ſo ſtupified with idle Fear as *Tantalus* [f], who dreads the Fall of the huge impending Stone upon him from above; but rather a vain Fear of the Gods torments Men in this Life, and terrifies them with all the Ills that Fortune thinks fit to lay upon them.

Nor do the Vultures dig into the Bowels of *Tityus*, as he lies in Hell, nor can they find in that large Breaſt of his a Liver they ſhall be for ever tearing out, tho' his Body were ever ſo big, tho' he not only cover'd nine Acres with his expanded Limbs, but could ſpread them over all the Earth; yet he would not be able to bear eternal Pains, nor could he furniſh an everlaſting

[f] *Lucretius* repreſents the Fable of *Tantalus* different from the common Fiction of the Poets; they place him up to the Chin in the River *Eridanus*, with Apples about his Head, but not admitted either to drink of the Water, or eat of the Apples. He follows their Opinion who ſay, that a Stone is hanging over the Head of *Tantalus* in Hell, the Fall of which he perpetually dreads.

Sed Tityos nobis Hic est, in amore jacentem
Quem volucres lacerant, atque exest anxius angor;
Aut alia quavis scindunt cuppedine curæ.
Sisyphus in vita quoque nobis ante oculos est,
Qui petere à populo fasceis, sævasque secureis
Imbibit; & semper victus, tristisque recedit:
Nam petere imperium, quod inane 'st, nec datur unquam,
Atque in eo semper durum sufferre laborem,
Hoc est adverso nixantem trudere monte
Saxum, quod tamen à summo jam vertice rursum
Volvitur, & plani raptim petit æquora campi.
Deinde animi ingratam naturam pascere semper,
Atque explere bonis rebus, satiareque nunquam,
Quod faciunt nobis annorum tempora, circum
Cùm redeunt: fœtusque ferunt, variosque lepores,
Nec tamen explemur Vitaï fructibus unquam;
Hoc (ut opinor) id est, ævo florente puellas
Quòd memorant, laticem pertusum congerere in vas:
Quod tamen expleri nulla ratione potestur.
Cerberus & Furiæ jam verò, & lucis egenus
Tartarus, horriferos eructans faucibus æstus,
Hæc neque sunt usquam, neque possunt esse profecto.
Sed metus in vita pœnarum pro malefactis
Est insignibus insignis, sceleriscque luela
Carcer, & horribilis de saxo jactu' deorsum,
Verbera, Carnifices, Robur, Pix, Lamina, Tædæ:

Meal out of his Body. But that Man is *Tityus*, whom by Love oppreſſed the Birds of Prey devour, and piercing Sorrow eats through, or any other impetuous Paſſion tears in pieces.

Siſyphus walks viſibly before us in this Life; it is he who ſets his Heart to court the People for Honours, for the Rods and cruel Axes, and is ever repulſed, and retires ſad and diſappointed; for in vain to hunt after empty Power, which is never obtained, and to ſuffer the hardeſt Labour in the Perſuit of it; This is to thruſt with all one's might the Stone up the Hill, which again tumbles down upon us from the Top, and rolls ſwiftly into the Plain below.

And then to be always obliging an ungrateful Mind, to be ever pouring Favours upon it, and never ſatisfy it, which the Seaſons of the Year, as they turn about, are always doing; they produce their Fruits, and the whole Variety of their Delights, and yet we are never filled with the Bleſſings of Life. This, I think, is what they feign of the young [g] Maids below, that they pump Water into a leaky Veſſel, which all their Labour can never raiſe to the Top.

Besides, *Cerberus*, and the Furies, and Hell void of Light, belching dreadful Flames from its Jaws, there are no ſuch Things in Nature, nor ever can be; but the Fear of ſore Puniſhment in this Life for diſtinguiſhed Crimes, and the Rewards of Villainy affright us: The Priſon, the terrible Fall from the *Tarpeian* Rock, Stripes, Executioners, the Gallows, melted Pitch, Saws,

[g] A common Dictionary will explain the Hiſtory of all theſe Fables, and give an Account of thoſe illuſtrious Perſons he mentions. He means here the fifty Daughters of *Danaus* King of the *Argives*.

and

Quæ tamen & si absunt, at Mens sibi conscia facti
Præmetuens, adhibet stimulos, torretque flagellis;
Nec videt interea, qui terminus esse malorum
Possit, nec quæ sit pœnarum denique finis:
Atque eadem metuit magis hæc ne in morte gravescant:
Hinc Acherusia fit Stultorum denique vita.
Hoc etiam tibi Tute interdum dicere possis:
Lumina sis oculis etiam bonus Ancu' reliquit,
Qui melior multis, quàm, Tu, fuit Improbe, rebus.
Inde alii multi reges, rerumque potentes
Occiderunt, magnis qui gentibus imperitârunt.
Ille quoque Ipse, viam qui quondam per mare magnum
Stravit, iterque dedit legionibus ire per altum,
Ac pedibus salsas docuit super ire lacunas:
Et contemsit, aquis insultans, murmura ponti,
Lumine ademto, animam moribundo corpore fudit.
Scipiades, belli fulmen, Carthaginis horror,
Ossa dedit terræ, proinde ac famul infimus esset.
Adde repertores doctrinarum, atque leporum,
Adde Heliconiadum comites; quorum unus Homerus
Sceptra potitus, eadem aliis sopitu' quiete 'st:
Denique Democritum postquam matura vetustas
Admonuit memorem motus languescere Mentis,

Sponte

and ſuffocating Smoke; and if there be none of theſe, yet the Mind, conſcious of Guilt, is ever in dread of theſe Tortures, it ſtings us to the Heart, and laſhes us with Rods, not to be endured: Nor has the Wretch a Proſpect of any End to the Miſeries he ſuffers, nor what can ſet Limits to his Puniſhment, and he fears leſt theſe Tortures ſhould fall the heavier upon him after Death; ſo that the Fools live as deplorable a Life as if they were really in Hell.

Thus then you may juſtly reaſon with your ſelf: The good King *Ancus* has long-ſince bid adieu to Life, a better Man by much than ſuch a Wretch as Thou, and ſo have many Kings and Potentates of the Earth, who ruled over mighty Nations.

Consider, even He, that He himſelf, who formerly made a Road over the wide Sea, gave a Paſſage to his Legions to march over it, and taught them to walk upon the ſalt Deep; who deſpiſed and inſulted the Waves and the Roarings of the Ocean: This *Xerxes*, cover'd with Darkneſs, has breath'd his Soul out of his Body long ago.

Scipio, that Thunderbolt of War and Dread of *Carthage*, has given up his Bones to the Earth, as if he had been the meaneſt of Slaves.

Add to theſe the Founders of Arts, and the Inventers of Verſe; add further the Companions of the Muſes, the mighty *Homer*, the ſole Sovereign of them all, he ſleeps quietly in the ſame Grave with the reſt.

Beſides, when a ripe old Age gave [h] *Democritus* warning that the Strength of his Mind decayed

[h] When *Democritus* was worn out with Age, and ſeem'd to be near his Death, his Siſter was one day complaining to him, that if he ſhould die ſhe ſhould not perform her Vows at

Sponte ſua letho caput obvius obtulit ipſe.
Ipſe Epicurus obît decurſo lumine vitæ,
Qui genus humanum ingenio ſuperavit, & omneis
Præſtinxit, ſtellas exortus uti ætherius Sol.
Tu verò dubitabis, & indignabere obire,
Mortua quoï vita eſt prope jam vivo, atque videnti?
Qui ſomno partem majorem conteris ævi?
Et vigilans ſtertis, nec ſomnia cernere ceſſas,
Sollicitamque geris caſſa formidine mentem?
Nec reperire potes, quid ſit tibi ſæpe mali, cùm
Ebrius urgeris multis Miſer undique curis,
Atque animi incerto fluitans errore vagaris?
Si poſſent Homines, proinde ac ſentire videntur,
Pondus ineſſe Animo quod ſe gravitate fatiget,
Et quibus id fiat cauſis cognoſcere, & unde
Tanta mali tanquam moles in pectore conſtet;
Haud ita vitam agerent, ut nunc plerumque videmus.
Quid ſibi quiſque velit, neſcire, & quærere ſemper,
Commutare locum, quaſi onus deponere poſſit.
Exit ſæpe foras magnis ex ædibus Ille,
Eſſe domi quem pertæſum 'ſt, ſubitoque revertit:
Quippe foris nihilo meliùs qui ſentiat eſſe.
Currit agens mannos ad villam Hic præcipitanter,
Auxilium tectis quaſi ferre ardentibus inſtans;
Oſcitat extemplo, tetigit, cùm limina villæ:

Aut

cayed, he met Death half-way, and chearfully obeyed the Summons.

Epicurus himſelf, who excelled the whole World in Wiſdom, and darkened all about him with his ſuperior Luſtre, as far as the bright mid-day Sun outſhines the Stars, is dead, and his Light of Life run out.

Shalt thou then repine, and grieve to die, whoſe Life is little more than a Scene of Death whilſt thou liveſt, with thy Eyes open? Who weareſt the greater Part of thy Life away in Sleep, who ſnoreſt and art ever dreaming whilſt thou art awake, and haſt thy Mind always tormented with empty Fear, nor art able to find what is the Malady that troubles thee, when thou reeleſt about, born down on all ſides by the ſevereſt Miſery, and wandereſt in the uncertain Mazes of Doubt and Error?

But if Men would really conſider, as they would be thought to do, that they are preſſed down by the natural Weight of their own Minds, and find out the Cauſes whence This proceeds, and whence ſo heavy a Load of Evils torments their Breaſt, they would not ſpend their Lives as we now ſee they do, not knowing their own Deſires, but every one ſtriving to change his Situation, as if that was the way to eaſe him of his Burden.

One, tired at home, leaves his noble Seat, and goes often abroad, but returns ſuddenly again; for he finds no Relief by ſhifting his Place. Another hurries and drives full-ſpeed to his Country-houſe, as it was all o' fire, and he came to extinguiſh it; he no ſooner ſets his foot within the doors, but preſently begins to yawn, or falls

at the Feſtival in honour of *Ceres*; but he bid her take heart, and bring him every day ſome warm Loaves of Bread, by ſmelling to which he kept himſelf alive till that Solemnity was over, and then willingly died.

Aut abit in ſomnum gravis, atque oblivia quærit,
Aut etiam properans urbem petit, atque reviſit.
Hoc ſe quiſque modo fugit: At, quem ſcilicet, ut ſit,
Effugere haud potis eſt, ingratis hæret, & angit,
Propterea, morbi quia cauſam non tenet æger:
Quam benè ſi videat: jam, rebus quiſque relictis
Naturam primum ſtudeat cognoſcere rerum,
Temporis æterni quoniam, non unius horæ
Ambigitur ſtatus, in quo ſit mortalibus omnis
Ætas poſt mortem, quæ reſtat, cumque, manenda.
Denique tantopere in dubiis trepidare periclis
Quæ mala nos ſubigit vitaï tanta cupido?
Certa quidem finis vitæ mortalibus adſtat,
Nec devitari lethum pote, quin obeamus.
Præterea, verſamur ibidem, atque inſumus uſque:
Nec nova vivendo procuditur ulla voluptas.
Sed dum abeſt, quod avemus, id exſuperare videtur
Cætera: poſt aliud, cùm contigit illud, avemus;
Et ſitis æqua tenet vitaï ſemper hianteis:
Poſteraque in dubio 'ſt fortunam quam vehat ætas,
Quidve ferat nobis caſus, quive exitus inſtet.
Nec prorſum, vitam ducendo, deminis hilum
Tempore de mortis, nec delibrare valemus,
Quo minùs eſſe diu poſſimus morte peremti.
Proinde licet quot vis vivendo condere ſæcla,
Mors æterna tamen nihilominùs illa manebit:
Nec minùs Ille diu jam non erit, ex hodierno
Lumine qui finem vitaï fecit, & ille
Menſibus atque annis qui multis occidit ante.

heavily to sleep, and strives to forget himself, or else posts as hard back, and returns to Town again. Thus he tries all ways to fly himself, but that Self it is, as it must be, out of his power to escape; he sticks close to him against his will, and sorely torments him. The restless Fool does not know the Cause of his Disease, if he throughly did, every one would give up all other Persuits, and apply chiefly to search into the Nature of Things; I do not mean to trouble himself about the Event of the present Hour, but inquire into the doubtful State of Eternity after Death, which is every one's Concern, and which must be the Lot of all Mankind.

Lastly, how many Evils does a fond Desire of Life oblige us so much to apprehend, tho' they may never happen? But there is a Boundary fixed to the Age of Man; we cannot avoid the Stroke of Death, die we must.

Besides, we are ever running on in a Circle of the same Actions, and ever persuing them; nor does living on afford us any new Delight. The Pleasure we covet eagerly exceeds every thing we enjoyed before, as long as it is absent; but when we have it in possession, we long passionately for another, and the same Thirst of Life hangs upon us, still gaping for more; and yet we know nothing what the Time to come may produce, what Chance may happen to us, and how the Scene will end: Nor can we, by living forward, take off a Moment from the Length of Death, it will always shew as if we had been dead ever so so long. Though you live ever so many Ages, the State of Death will be still eternal; and he that died to-day, is to all purposes as long dead, as he that died a thousand Years ago.

The END *of the* THIRD BOOK.

THE

INDEX

TO THE

FIRST VOLUME.

A.

Page

ACCIDENTS. — — 39
Acheron. — — 15
Actions, their Nature. — 43
Æther. — — — 25
Ætna described. — — — 61
Air rarefied, 35. Not the first Principle. — 59
ALL, its Nature. — 81
Anaxagoras. — — 71
Animals, their Dissolution, 181. Their Growth and Decay. —— —— 191
Annihilation. — — 23
Atoms, 51. Their Motion, 89. Their continual Motion, 125. They have no Colour. —— 159

B.

Beings described, 33. They continually change. 171
Blood, the Notion of the Soul's being in the Blood. 205
Body, the Nature of Bodies, 33. The meeting of broad Bodies 35. Every Thing either Body or Void, 37. Bodies void of Parts, 51. Body and Void infinite, 87.

The Motion of Bodies, 91. The Descent of Bodies explained, 117. Some Bodies void of Colours, 169. The Body dies without the Soul. —— 229

C.

Centre, the Universe has no Centre. —— 89
Changes of Things according to the Seeds. — 183
Colours, the Form of their Seeds, 133. Seeds have no Colour, 159. Colour is Light reflected, 163. The whole Nature of it explained. — 167
Conjuncts of Things. — — 39
Creatures, their Form different. — 129
Curetes. —— —— 151
Cybele, her Mysteries described. —— 149

D.

Dart, the casting of a Dart. — — 81
Death, the Fear of it the Cause of all Evils, 207. Reasons against the Fear of it, 267. No Sense after Death. — — — — 271
Democritus, his Opinion, 231. The Nature of his Death. — — — — 283
Descent of Things explained. — — 113
Doves, the Colours of their Feathers. — 165
Drunken Man described. — — 239

E.

Earth, its Fruits, 22. Not the first Principle, 61. The Mother of the Gods, 149. Is void of Sense, 153. The common Parent of Creatures, 181. And Preserver of them. — — —— — 195
Elements, 61. The first Principles. —— 65
Empedocles. — — — 61
Ennius. —— —— —— 15
Envy, its Effects. — — 207
Epicurus, his Character, 11. His Opinion of Fire, 135. His Praises celebrated, 201. His Death. — 285
Events. — — — 39
Eye, the Nature of the Eyes. 231

F.

Fæcula. — — — 135
Fear of Death, its Effects. — — 207

Fire,

INDEX.

Fire, *Heraclitus* his Opinion of Fire, 59. Celeſtial Fire, 67. Fire made by Colliſion. — 75
Figure, Variety of Figures finite. — 139
Fiſh, their ſwimming. — — 35
Fit, a Perſon in a Fit. — — 239
Flame, its Motion explained. — — 113
Food, its Nature, 73. The Nouriſhment of all Creatures, 153. The Variety of it. — 157
Form of the Seeds. — — 127
Free-will, the Cauſe of it. — — 121

G.

Gods, their Nature deſcribed. — 9

H.

Harmony, the Soul a Sort of Harmony. — 209
Heat and Cold. — — 143
Helen. — — — 41
Heraclitus. — — 55
Homœomery. — — 71
Homer, 15. His Death. — — 283

I.

Immortal Nature, what. — 265
Individuals, many of the ſame Species. — 187
Infinity, of Atoms. — — 145
Inula. — — — 135
Invocation, of *Venus*. — — — 1
Iphigenia. — — — 13

L.

Leaſt in Bodies, 51. The Neceſſity of it. — 63
Letters. — — 69
Light, its Principles. — — 131
Lightning, its Nature explained. — 131
Liquors, the Form of their Seeds. — — 137

M.

Matter eternal, 45. Its Way of acting, 111. Combuſtible, how reſolved. — 155
Melibœa. — — — 141
Memmius. — — — — 7
Middle, the Nature of it. — — 91

INDEX.

Mind, its Nature explained, 205. Is a corporeal Substance, 209. How it affects the Body, 215. It suffers Pain, 217. Is composed of subtil Seeds, *ibid.* Is made up of four Parts, 221. The Vices of it corrected by Philosophy, 225. Is the great Preserver of Life, 233. The Bonds between the Mind and Soul, 235. The Mind subject to Death, 239. Is affected by Medicine, 241. Cannot subsist without the Body, 245. A guilty Mind. — — 283
Mortality, Arguments for the Mortality of the Soul, 263
Motes, in the Sun. — — 107
Motion, of the Seeds, 103. The Beginning and Progress of Motion. — — — 121

N.

Nothing, made from Nothing, 17. Nor returns to Nothing. — — — 25

P.

Philosophy described. — — 97
Phrygian Musick. — — 151
Place, lowest Place explained. — — 83
Principles, of Things fixed, 21. The first Principles explained, 65. Principles of Things infinite, 145. They are simple, 179. Purple. — 141
Pythagoras, his Opinion of the Soul. — 259

R.

Rays, of the Sun. — — 109
Rebounding of the Seeds. — — 105
Religion, the Character of it. — 11
Riches, their Vanity. — — 99

Scipio, his Death. — 283
Sea, its Water fluid and bitter, 137. Its Colour explained. — — 163
Seeds, or first Principles, 19. Eternal, 23. Invisible, 27. They are solid, indissoluble, 45. Unchangeable, 49. Entire, 57. Their Nature according to *Anaxagoras*, 71. Common Seeds mixed in Things, 75. The Motion of the Seeds, 87. How Bodies are produced by Seeds, 101.

101. The wandring and tossing of the Seeds, 105. Swiftness of the Seeds, 109. Their Passage through a Void, 111. The Descent of the Seeds explained, 117. They decline in their Motion, 119. Number of Seeds fixed and certain, 125. The Form of the Seeds, 127. Their Form that affect the Sense, 133. Things made of mingled Seeds, 147. Seeds have no Colour, 161. Have no Qualities, 169. The Nature of soft Seeds, 173. Seeds insensible produce Things sensible, 175. They are without Pain or Pleasure, 179. The Nature of the Seeds that compose the Mind —— 219

Sense, the Senses judge of the Qualities of Things, 167. Some taken away and restored, 177. Belongs to the Soul and Body, 231. Sensible Things flow from Seeds void of Sense. — — — 171

Sepulture, the Ways of it. —— 273

Sicily. —— — — 61

Sight, the Nature of it. — — 127

Sisyphus. — — — 281

Smell, no Smell in the Seeds, 169. Its Nature. 29

Softness. —— —— 49

Solidas, Indissoluble. —— 53

Something, a fourth Something described. 223

Soul, the Nature of it, 15. Is corporeal, 211. Consists of Vapour, Air and Heat, 219. Is contained by the whole Body, 227. Is mortal and perishable, 235. Grows up and dies with the Body, 237. Cannot act without the Body, 245. Is divided, and therefore mortal, 253. Is not infused at the Birth, 255. Whether the Soul remains in a dead Body. —— 257

Space, defined, 33. Is without Bounds. 83, 185

Square, the Nature of it. —— 163

Stoics, their Opinion of the World. —— 85

Stroke, in Bodies. —— 123

Subject, of the Poem. —— — 9

Sun, how supplied. — 93

Swooning Fit described. —— 247

T.

Tantalus, *Tityus*. —— —— 279

Temper, whence the different Temper of Creatures proceed. —— —— 225

Things

INDEX.

Things not deſtroyed by Time, 23. Are in conſtant Wear, 31. How they are ſupported, 69. Are compoſed of mingled Seeds, 155. Appear of different Colours. —— —— 161
Time, its Nature, 25. Of itſelf is Nothing. 41
Touch, the Nature of that Senſe. —— 13

V.

Vanity of Things. —— 99
Vapour, Life depends upon it, 213. The inviſible Vapour deſcribed. —— —— 223
Venus, her Character. —— —— 2
Victim, the ſacrificing of black Victims. —— 205
Univerſe, infinite, 81. Not governed by the Gods. 189
Void, its Nature, 31. The Neceſſity of it, 63. The Motion of Things through a Void, 119. A Void infinite, 185

W.

War, the Arts of War. —— 221
Water, not the firſt Principle. —— 59
Weight, in Bodies. —— —— 123
Winds, their Nature. —— —— 27
World, not made by the Gods, 113. There are many Worlds, 183. The World receives new Seeds, 19. The World grows old, and decays. 193

X.

Xerxes. —— —— —— 283

FINIS.

BOOKS lately Printed for D. BROWNE, without *Temple-Bar*.

1. HORACE's SATIRES, EPISTLES, and ART of Poetry, tranſlated into *Engliſh*, with Notes. By S. DUNSTER, D. D. Prebendary of *Sarum*. The 5th Edition reviſed and corrected, with conſiderable Improvements and ſome additional Notes.

2. A *New Tranſlation* of JUVENAL's SATIRES, with Explanatory and Claſſical Notes, relating to the Laws and Cuſtoms of the *Greeks* and *Romans*.

3. The SATIRES of PERSIUS tranſlated into *Engliſh* by THOMAS SHERIDAN D. D. with explanatory Notes. The 2d Edition; to which is added an alphabetical Index.

4. BIOGRAPHIA CLASSICA; the LIVES and CHARACTERS of all the CLASSIC *Authors*, the *Grecian* and *Roman* Poets, Hiſtorians, Orators, and Biographers, in 2 Volumes, *viz.*

VOL. I.

Containing the Lives, &c. of the *Grecian* Poets.

Homer.	Pindar.	Simonides.	Callimachus.
Heſiod.	Æſchylus.	Ariſtophanes.	Apollonius.
Sappho.	Sophocles.	Theocritus.	Aratus.
Alcæus.	Euripides.	Lycophron.	Oppian.
Anacreon.			

The *Roman* Poets.

Plautus.	Tibullus.	Seneca.	Juvenal.
Terence.	Propertius.	Lucan.	Martial.
Lucretius.	Phædrus.	Perſius.	Valerius Flaccus.
Catullus.	Marcus Manilius.	Silius Italicus.	Auſonius.
Virgil.	Ovid.	Statius.	Claudian.
Horace.			

VOL. II.

Containing the Lives, &c. of the *Grecian* Hiſtorians.

Herodotus.	Polybius.	Arrian.	Herodian.
Thucydides.	Diodorus Siculus.	Appian.	Plutarch.
Xenophon.	Dion. Hal.	Dio Caſſius.	Lucian.
Demoſthenes.			

The *Roman* Hiſtorians.

Caius Criſpus Salluſtius.	Corn. Nepos.	Titus Petronius Arbiter.	Suetonius Tranquillus.
Caius Julius Cæſar.	Titus Livius.	Corn. Tacitus.	Plinius Jun.
Marcus Tullius Cicero.	Velleius Paterculus.	Lu. Annæus Florus.	M. Junianus Juſtinus.
	Quintus Curtius Rufus.		

With an Hiſtorical and Critical Account of them and their Writings; illuſtrating their ſeveral Excellencies, and ſhewing their Defects, from the Judgment and Remarks of the moſt celebrated Critics, both Ancient and Modern.

5. The

5. The five Books of *Æsopian* FABLES of PHÆDRUS, *Augustus Cæsar*'s Freed-Man; with a numerical Key adjoining to each Line, directing to take the Words in construing in proper Order; and also the Notes of PETER DANET, for the Use of the *Dauphin*, translated into *English*. To which is added, a copious parsing Index, containing every Word in the Fables with their proper *English*, and a grammatical Praxis on them referring to the Rules of Grammar; by the Assistance of which, young Scholars may be enabled, of themselves, to learn their Lessons in *Phædrus*. For the Use of Schools, by N. BAILEY. The 6th Edition corrected and improved.

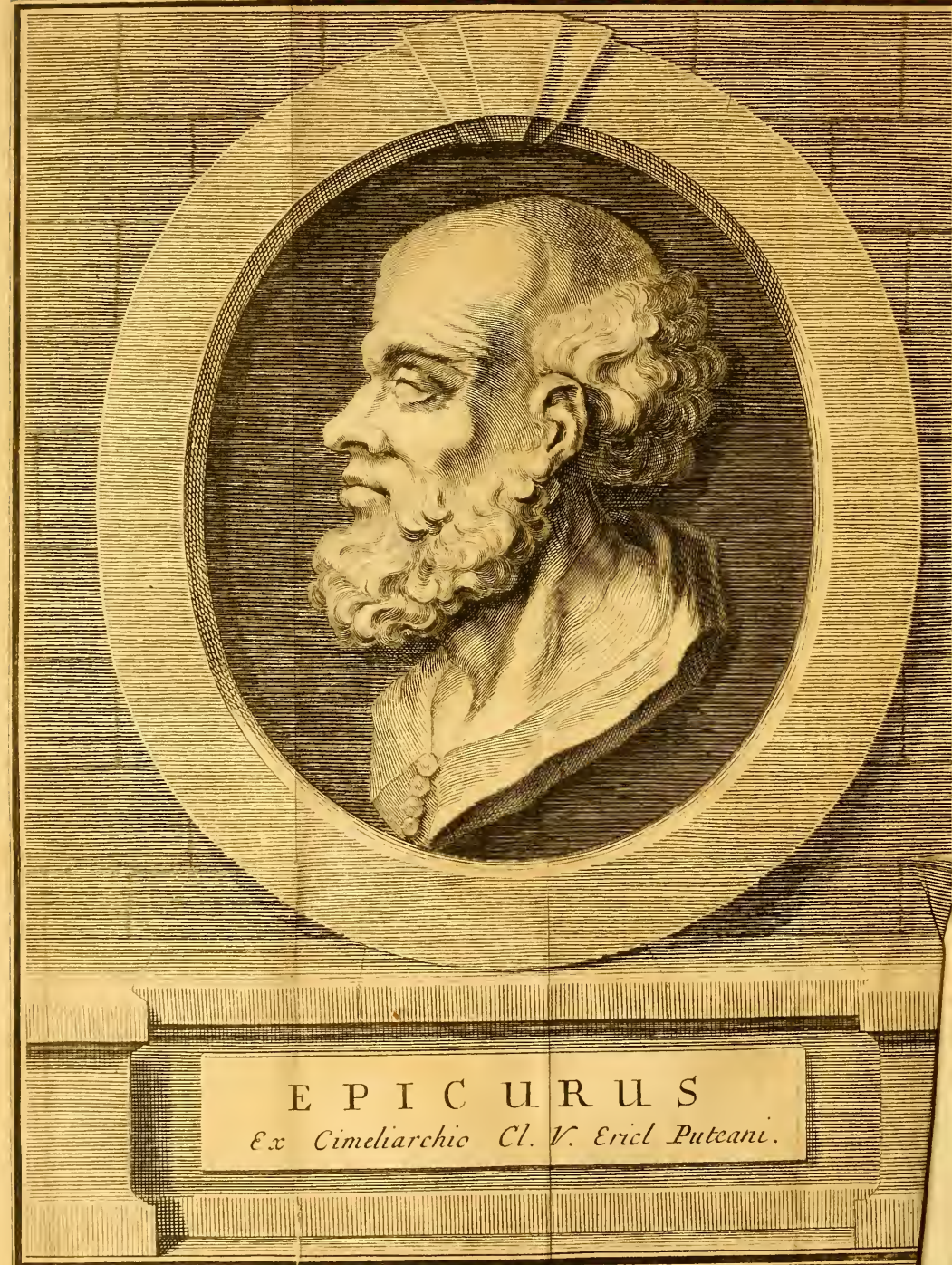
6. MEMORIA TECHNICA; or a new Method of ARTIFICIAL MEMORY: applied to and exemplified in Chronology, History, Geography, Astronomy; also *Jewish*, *Grecian*, and *Roman* Coins, Weights and Measures, *&c.* with Tables proper to the respective Sciences, and memorial Lines adapted to each Table, by RICHARD GREY D. D. Rector of *Hinton* in *Northamptonshire*. The 3d Edition corrected and improved.

7. The MEMOIRS of CHARLES LEWIS BARON DE POLLNITZ: Being the Observations he made in his late Travels from *Prussia* through *Poland*, *Germany*, *Italy*, *France*, *Spain*, *Flanders*, *Holland*, *England*, &c. Discovering not only the Present State of their most noted Cities and Towns, but the Characters of the several Princes and Princesses, and of their most noted Generals, Ministers, and Favourites both late and present. Interspers'd with divers curious and entertaining Narratives, as well regarding Affairs of State as those of Love and Gallantry. In 4 Volumes. The 2d Edition.

8. MEMOIRS of the DUKE DE RIPPERDA, first Ambassador from the States General to his Most Catholick Majesty, then Duke and Grandee of *Spain*; afterwards Bashaw and Prime Minister to *Muly Abdalla*, Emperor of *Fez* and *Morocco*, *&c.* Containing a succinct Account of the most remarkable Events which happened between 1715 and 1736. Interspers'd throughout with many curious Particulars relating to the Cardinals del *Giudice*, and *Alberoni*, the Princess of *Ursins*, Prince *Cellamere*, the Marquis *Beretti Landi*, M. de *Santa Cruz*, and other Persons of Distinction in the *Spanish* Court. As also a distinct and impartial Detail of the Differences between the Courts of *London* and *Madrid*. With many Memorials and other valuable Papers. And an Alphabetical Index. The 2d Edition, with the Addition of an Appendix.

9. INSTRUCTIONS for PLANTING and MANAGING HOPS, and for raising Hop-poles. Drawn up and published by order of the *Dublin-Society*. Price 1*s*.

MDCCXLIII.



EPICURUS

Ex Cimeliarchio Cl. V. Ericl Puteani.

T. LUCRETIUS CARUS

OF THE

NATURE of *THINGS*,

IN SIX BOOKS.

ILLUSTRATED with

Proper and Useful NOTES.

Adorned with COPPER-PLATES,

Curiously ENGRAVED

By *GUERNIER*, and others.

Carmina sublimis *tunc sunt peritura* Lucretî
Exitio Terras cum dabit una Dies. OVID.

VOL. II.

LONDON:
Printed for DANIEL BROWNE, at the *Black Swan*
without *Temple-Bar*.

MDCCXLIII.

A NEW

TRANSLATION

OF

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE ARGUMENT OF THE FOURTH BOOK.

THIS Book begins with a Repetition of the ſame Compariſon the Author introduced in the Firſt Book, v. 925, *to relieve the Mind of his* Memnius *from the Roughneſs and Unpleaſantneſs of the Subject upon which he was diſputing, and to beſpeak the Docility and Attention of his Readers. He then enters upon his Subject, which treats of the Senſation of Animals, as well when they are awake, as when they are ſleeping; that is, to uſe the Expreſſion of* Lucretius, *he explains the Senſes of the Mind, as well as thoſe of the Body; he begins with the Images of Things, and inſiſts ſtrenuouſly, that all Senſation is made by them. He ſays, that certain moſt tenuious and ſubtil Images are continually flowing from the Surface of all Bodies, that they fly about in the Air, but nevertheleſs are inviſible, unleſs they be reflected upon the Sight from Mirrours or Water. Then he deſcribes the extreme Tenuity of ſuch Images, and from thence takes occaſion to confirm the Doctrine he taught in the firſt Book concerning the Exiguity of his Atoms. He lays down two Sorts of Images, one that of their own Accord are bred in the Clouds, which repreſent the Images of Giants, or of Moun-*

tains, or of ſome monſtrous Beaſt; the other, ſuch as fly off from the Surface of Bodies, and are, as it were, the Films or Membranes of them. He calls them Exuviæ Rerum, *and then teaches that theſe* Exuviæ *are perpetually flying off from the Surface of all Bodies, and are carried through the Air with ſuch wonderful Celerity, that they exceed even the Rays of the Sun in Swiftneſs. The* Sight *being the principal of the Senſes, he begins with that, and teaches that it proceeds from the Incurſion and Striking of thoſe Images upon the Eyes, in the ſame manner as the other Senſes are cauſed by Corpuſcles, that ſtrike from without upon the ſeveral Organs of Senſation. He explains in the mean time all Things that relate to the efficient Cauſes of Sight, and propoſes ſeveral Problems relating to Viſion, which he ſolves with Truth and Propriety. But that no one, from the Explication of theſe Problems, might accuſe the Senſes of Deception or Fallacy, he at large aſſerts their Certainty, and by the way takes Occaſion to confute the* Sceptick, *and lays it down as an indiſputable Maxim, that all Truth is grounded on the Certainty and on the Belief of the Senſes. He then proceeds to the other Senſes, and inſiſts that* Voice *and* Sound *are corporeal Images, which ſtrike the Ear, and are the Cauſe of* Hearing. *He then explains the Nature of* Voice, *and the Manner of its Formation, and gives a Reaſon why the ſame Voice is heard by many Perſons at once, and treats of what an Eccho is, and what is the Cauſe of it. He then gives Inſtructions concerning* Savour, *and* Taſte, *and* Odour, *and* Smell; *particularly what Savour and Odour are, and why all do not perceive them; why the ſame Food is ſweet to ſome, and bitter to others; why one Odour is more agreeable to one, than it is to another; and why the ſame Voice ſtrikes a Terror into ſome, and is agreeable, at leaſt not frightful, to others. He proceeds to treat of Imagination and Cogita-*

Cogitation, which he says are made likewise by the same most subtil Images of Things presenting themselves to the Mind: He then explains several Problems relating to Cogitation; why, for Example, we seem to see in our Dreams Persons who are dead; why the Images of Things seem to tarry with us, while we are thinking of the Things whose Images they are; why we think of a sudden upon whatever we will; why we seem to ourselves to move in our Dreams. He says the Tongue, the Eyes, the Nostrils, the Ears, and all the Organs of Sensation were made before the Use of them, quite contrary to what has happened in regard to all Artificial Things, the Invention of which succeeded the foreseen Want and Usefulness of them. He gives the Reason why Animals seek after their own Meat and Drink, why we move whenever we please, and explains what it is that actuates and drives forward the Bulk of our Bodies: He treats of Sleep and Dreams, and teaches in the first Place, how Sleep *is caused in us, and in all other Creatures; then he assigns several Causes of different Dreams: At last, he falls upon the Subject of* Venery; *and to the End of the Book continues to treat of Love, of Barrenness, of Fruitfulness, and other Points relating to Generation, with more Freedom perhaps than is becoming: But Natural Philosophers generally allow themselves uncommon Liberties upon such Occasions.*

T. Lucretii Cari

DE

RERUM NATURA.

LIBER QUARTUS.

AVia Pieridum perago loca nullius antè
Trita solo, juvat integros accedere fonteis;
Atq; haurire: juvatq; novos decerpere flores,
Insignemque Meo capiti petere inde coronam,
Unde priùs Nulli velârint tempora Musæ.
Primùm quòd magnis doceo de rebus, & arctis
Religionum animos nodis exsolvere pergo;
Deinde, quòd obscura de re tam lucida pango
Carmina, musæo contingens cuncta lepore:
Id quoque enim non ab nulla ratione videtur.
Nam veluti Pueris absynthia tetra Medentes,

Cùm

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE

FOURTH BOOK.

[a] INSPIR'D, I wander o'er the Muſes Seats, of difficult Acceſs, and yet untrod; I love to approach the pureſt Springs, and thence to draw large Draughts; I love to crop freſh Flowers, and make a noble Garland for my Head from thence, where yet the Muſes never bound another's Temples with a Crown like mine. And firſt I write of lofty Things, and ſtrive to free the Mind from the ſevereſt Bonds of what Men call Religion; then my Verſe I frame ſo clear, altho' my Theme be dark; ſeaſoning my Lines with the Poetic Sweets of Fancy, and Reaſon juſtifies the Method; for as Phyſicians when

[a] The firſt twenty-nine Lines of this Book, in which the Poet invites the Reader's Attention, are to be found near the latter End of Book the Firſt.

Cùm dare conantur, priùs oras pocula circùm
Contingunt mellis dulci, flavoque liquore,
Ut Puerorum ætas improvida ludificetur
Labrorum tenus, interea perpotet amarum
Absynthi laticem, deceptaque non capiatur;
Sed potiùs tali tactu recreata valescat.
Sic Ego nunc, quoniam hæc Ratio plerumq; videtur
Tristior esse, quibus non est tractata, retroque
Volgus abhorret ab Hac; volui tibi suaviloquenti
Carmine Pierio rationem exponere nostram,
Et quasi Museo dulci contingere melle;
Si tibi forte animum tali ratione tenere
Versibus in nostris possem, dum perspicis omnem
Naturam rerum; ac persentis utilitatem.
Sed quoniam docui, cunctarum Exordia rerum
Qualia sint, & quam variis distantia formis
Sponte sua volitent æterno percita motu:
Quoque modo possint res ex his quæque creari:
Atque Animi quoniam docui natura quid esset,
Et quibus è rebus cum Corpore compta vigeret;
Quove modo distracta rediret in Ordia prima:
Nunc agere incipiam tibi, quod vehementer ad has res
Attinet, esse ea, quæ rerum Simulacra vocamus:
Quæ quasi Membranæ summo de corpore rerum
Dereptæ volitant ultro citroque per auras:

they would prevail on Children to take down a bitter Draught of Wormwood, firſt tinge the Edges of the Cup with ſweet and yellow Honey, that ſo the Children's unſuſpecting Age, at leaſt their Lips, may be deceived, and take the bitter Juice; thus harmleſly betrayed, but not abuſed, by taſting thus they rather have their Health reſtored: So I, becauſe this Syſtem ſeems ſevere and harſh, to ſuch who have not yet diſcerned its Truth, and the common Herd are utterly averſe to this Philoſophy, I thought it fit to ſhew theſe rigid Principles in Verſe, ſmooth and alluring, and tinge them, as it were, with ſweet Poetic Honey, thus to charm your Mind with my ſoft Numbers, till you view the Nature of all Things clearly, and perceive the Uſefulneſs and Order they diſplay.

[b] Now ſince I taught what are the firſt Principle of all Things, and how they differ in their Figures, and wander of their own accord, urged on by an eternal Motion, and how of them all Beings firſt are formed; and I have ſhewn the Nature of the Mind, of what Seeds compoſed, and how it exerts itſelf united with the Body, and ſeparated from it, how it returns to its firſt Principles again: I ſhall now begin to explain what is of the neareſt Concern to theſe Inquiries, and prove that there are what we call the *Images* of Things, which, like Membranes, or Films, flowing from the Surface of Bodies, fly every Way abroad through the Air. Theſe, while we are

[b] After he has recited the Subjects of his Inquiries in the preceding Books, he ſays, he will now treat of the Images, which, like Films and Membranes of Bodies, are perpetually flowing from the Surface of Things, and preſenting their Species and Figures to us. If they come whole, and without Mixture, we then perceive Things that truly have a Being; if they come maimed, inverted, or joined to one another, from thence proceed the Phantaſms of Centaurs, and the like Monſters, and ſometimes too the Spectres of the Dead; for the Soul, we are told, dies with the Body.

awake,

Atque eadem nobis vigilantibus obvia menteis
Terrificant, atque in somnis, cùm sæpe figuras
Contuimur miras simulacraque luce carentum;
Quæ nos horrificè languenteis sæpe sopore
Excierunt: Ne forte Animas Acherunte reamur
Effugere, aut Umbras inter vivos volitare:
Neve aliquid nostri post mortem posse relinqui,
Cùm Corpus simul, atque Animi natura peremta,
In sua discessum dederunt Primordia quæque.
Dico igitur, rerum Effigias, tenuisque figuras
Mittier ab rebus summo de corpore earum;
Quæ quasi Membrana, vel Cortex nominitanda 'st,
Quòd speciem, ac formam similem gerit ejus Imago,
Quojuscunque cluet de corpore fusa vagari.
Id licet hinc quamvis hebeti cognoscere corde;
Principio, quoniam mittunt in rebus apertis
Corpora res multæ, partim diffusa solutè,
Robora seu Fumum mittunt, igneisque Vaporem:
Et partim contexta magis, condensaq; ut olim
Cùm veteres ponunt tunicas æstate Cicadæ;
Et Vituli cùm membranas de corpore summo
Nascentes mittunt, & item cùm lubrica Serpens
Exuit in spinis vestem: Nam sæpe videmus
Illorum spoliis vepreis volitantibus auctas.
Hæc quoniam fiunt, tenuis quoque debet Imago
Ab rebus mitti summo de corpore earum.
Nam, cur illa cadant magis, ab rebusque recedant,
Quàm quæ tenuia sunt, hiscendi 'st nulla potestas.
Præsertim cum sint in summis corpora rebus
Multa minuta, jaci quæ possint ordine eodem
Quo fuerint, veterem & formæ servare figuram;

Et

awake, often ruſh upon our Minds and terrify us, and likewiſe ſleeping, when we think we ſee ſtrange Phantoms and Spectres of the Dead, which ſhake us horribly when faſt aſleep. For ſure we are not to imagine, that the Souls are broke looſe out of Hell, or that the Ghoſts hover and play about the Living, or that any Part of us remains after Death; ſince the Soul and Body, once diſſolved, return ſeverally into their firſt Seeds from whence they were produced.

I SAY then, that Images or tenuious Figures are always flowing, or ſent out from the Surface of Bodies, which may be called the Membranes or the Bark of Things; and theſe ſeveral Images bear the ſame Shape and Form, as the particular Body from whence they flow.

THIS requires no extraordinary Apprehenſion to conceive, for to give a plain Inſtance; many Things emit Bodies from themſelves, ſome more rare and diffuſed, as Wood diſcharges Smoke, and Fire a Vapour; others more denſe and compact, as when Graſhoppers in Summer caſt their old Coats, and Calves new-born drop the Pellicules in which they are incloſed; or as the Winding Snake leaves his Skin among the Thorns, for the Briers we often ſee adorned with their light Spoils. This being ſo, it follows, that a very ſubtle Image may fly off from the utmoſt Surface of Bodies; for there can be no Reaſon given, why theſe, and not others more thin than theſe, may not fall off and be diſcharged; eſpecially ſince in every Surface there are many minute Corpuſcles, that may be caſt off in the very ſame Order they are ranged in the Body, and ſo preſerve their [c] old Form and Figure; and

[c] That is, the Image of their Form; for Form, according to *Epicurus*, is that which continually remains in the Surface of the Body, while the Image, as a Spoil, is continually flying away.

they

Et multo citiùs, quantò minùs endopediri
Pauca queunt, & sunt in prima fronte locata.
Nam certè iaci, atque emergere multa videmus,
Non solùm ex alto, penitusque, ut diximus ante,
Verùm de sumi isipsum quoque sæpe colorem:
Et volgò faciunt id lutea, russaque Vela,
Et ferrugina, cùm magnis intenta Theatris
Per malos volgata, trabeisque trementia flutant:
Namque ibi confessum Caveaï subter, & omnem
Scenaï speciem, Patrum, Matrumque, Deorumque,
Inficiunt, coguntque suo fluitare colore:
Et quantò circum mage sunt inclusa Theatri
Mœnia, tam magis hæc intus perfusa lepore
Omnia conrident conrepta luce diei.
Ergo Lintea de summo cùm corpore fucum
Mittunt, Effigias quoque debent mittere tenueis
Res quæque, ex summo quoniam jaculantur utræque.
Sunt igitur, jam formarum vestigia certa,
Quæ vulgò volitant subtili prædita filo,
Nec singillatim possunt secreta videri.
Præterea, omnis Odos, Fumus, Vapor, atque aliæ res
Consimiles, ideo diffusæ rebus abundant,
Ex alto quia dum veniunt intrinsecus ortæ,
Scinduntur per iter flexum; nec recta viarum
Ostia sunt, qua contendunt exire coortæ.
At contrà, tenuis summi membrana Coloris
Cum jacitur, nihil est, quod eam discerpere possit,
In promptu quoniam 'st in prima fronte locata.

Postremo

they are the readier to fly off, becauſe they are ſmall, and not ſo liable to be ſtopped, and are placed likewiſe upon the utmoſt Surface.

FOR it is certain, that many Particles are not ſent out and get looſe only from the middle and inward Parts, as we ſaid before, but [d] Colour itſelf is diſcharged from the Surface of Bodies. And ſo Curtains, yellow, of a deep red, or blew (as they hang in lofty Theatres, waving expanded on the Beams, and flowing on the Pillars with the Wind) do this; for they ſtain the Stage, the Scenes, the Audience, Senators, Matrons, and the Images of the Gods, and cauſe them to wave in their own gaudy Dye; and the more the Walls of the Theatre are darkned, and the Day-light ſhut out, every Thing within is ſpread over and ſhines out with a brighter Luſtre. Since therefore theſe Curtains diſcharge their Colours from the Surface, all Things, by the ſame Rule, may emit ſubtle Images, for thoſe are thrown off from the Surface as well as theſe.

THERE are therefore certain Images of Things, of a fine and ſubtle Contexture, that are always flying about, and are impoſſible ſeverally to be diſcovered by the Eye.

BESIDES, all Smell, Smoke, Vapour, and other ſuch Things fly off from Bodies in a diffuſed and ſcatter'd Manner, becauſe as they paſs to the Outſide of Bodies from within, they are broken and divided by the crooked Pores they muſt make their Way through; the Road they are to take is full of Windings, as they attempt to riſe and fly out; but, on the contrary, when the Membrane of Colour is thrown off, there is nothing to diſorder it, becauſe it lies diſentangled upon the very Surface.

AND

[d] Colours get looſe and are reflected from the Images of Things

Postremo, in Speculis, in Aqua, Splendoreque in omni
Quæcunque apparent nobis Simulacra necesse 'st,
Quandoquidem simili specie sunt prædita rerum,
Esse in imaginibus missis consistere eorum:
Nam cur illa cadant magis, ab rebusque recedant
Corpora res multæ quæ mittunt Corpore aperto,
Quàm quæ tenuia sunt, hiscendi 'st nulla potestas.
Sunt igitur tenues formarum, consimilesque
Effigiæ, singillatim quas cernere nemo
Cùm possit; tamen assiduo, crebroque repulsu
Rejectæ, reddunt Speculorum ex æquore visum:
Nec ratione alia servari posse videntur.
Tantopere, ut similes reddantur quoique figuræ:
Nunc age, quàm tenui natura constet Imago,
Percipe: & imprimis quoniam Primordia tantum
Sunt infra nostros sensus, tantòque minora,
Quàm quæ primùm oculi cæptant non posse tueri.
Nunc tamen id quoque uti confirmem, Exordia rerum
Cunctarum quàm sint subtilia, percipe paucis.

Primùm

AND then [e] ſince the Forms that appear to us in Looking-glaſs, in Water, and all poliſhed Bodies, are exactly like the Things whoſe Images they are, they muſt neceſſarily be compoſed of the Images that flow from the Subſtance of the Things themſelves; for why thoſe Particles ſhould fall away, and be diſcharged from Bodies which are diſcovered by the Eye, rather than theſe that are more thin and ſubtle, no Reaſon can properly be aſſigned.

THERE are therefore tenuious and fine Shapes of the ſame Figure with the Things themſelves, which, tho' they cannot ſingly be diſtinguiſhed by the Sight, yet being reflected, and ſwiftly and conſtantly repelled from the ſmooth Plane of the Glaſs, become viſible, nor can any other Reaſon be ſo properly offered, why Forms ſo like the Things are returned to us.

AND now conceive, if you can, of what a tenuious and ſubtle Nature an Image conſiſts; and for this Reaſon, in the firſt place, becauſe the Seeds of Things are ſo much beyond the Reach and Diſcovery of our Senſes, and are infinitely leſs than thoſe Bodies that eſcape the Obſervation of the moſt curious Eye; as a Proof, how ſubtle the firſt Principles of Things are, attend to theſe ſhort Obſervations.

Things in ſuch a manner, as argues likewiſe the Direption and getting off of Images.

[e] Since the Images, we ſee in Mirrours, in Waters, or in any ſmooth and poliſhed Body, are exactly like the Things whoſe Images they are, therefore thoſe Forms muſt neceſſarily be compoſed of the Images that flow from the Subſtances of the Things themſelves; the very utmoſt Film, which before adher'd to the whole Thing, is ſeparated from it, as it were a Membrane, and ſtrikes into the Glaſs or Water. We are to obſerve, that the Image of each Thing, that is ſeen in the Glaſs, or in Water, is not ſingle and one only, but many, which, nevertheleſs by being reflected to the Eyes by a never-ceaſing Reverberation, ſeem not to be many, but only one.

And

Primùm Animalia ſunt jam partim tantula, eorum
Tertia pars nulla ut poſſit ratione videri.
Horum Inteſtinum quodvis quale eſſe putandum 'ſt?
Quid? Cordis globus aut Oculi? quid? Membra? quid? Artus?
Quantula ſunt? quid? præterea Primordia quæque,
Unde Anima, atque Animi conſtet natura neceſſum 'ſt,
Nonne vides, quam ſint ſubtilia, quámque minuta?
Præterea, quæcunque ſuo de corpore odorem
Exſpirant acrem, Panaces, Abſinthia tetra,
Abrotonique graves, & triſtia Centaurea:
Horum unumquodvis leviter ſi fortè ciebis,
Quamprimum noſcas rerum Simulacra vagare
Multa modis multis, nulla vi, caſſaque ſenſu.
Quorum quantula pars ſit Imago, dicere nemo 'ſt
Qui poſſit, neque eam rationem reddere dictis.
Sed ne fortè putes ea demum ſola vagare,
Quæcunque ab rebus rerum Simulacra recedunt:
Sunt etiam, quæ ſponte ſua gignuntur, & ipſa
Conſtituuntur in hoc cœlo, qui dicitur aër:
Quæ multis formata modis ſublimè feruntur,
Nec ſpeciem mutare ſuam liquentia ceſſant:
Et quoiuſque modi formarum vertere in ora.
Ut nubeis facilè interdum concreſcere in alto
Cernimus, & mundi ſpeciem violare ſerenam,
Aëra mulcenteis motu: Nam ſæpe Gigantum

Ora

AND first there are Animals so exceeding small, that one third Part of them cannot possibly by any means be discover'd. What are you to conceive of the Bowels of these Creatures? Of their little Hearts and Eyes? What of their Members? What are you to think of their Limbs? How very small are they? What besides of the Seeds which compose the Soul and Mind, don't you imagine how subtle and minute they are? *The Subtilty of the Images.*

BESIDES, [f] Herbs that exhale a sharp Smell from their Bodies, such as All-heal, bitter Wormwood, strong Southernwood, and sour Centaury, if you shake any of these ever so lightly, you may be sure many Particles fly off, and scatter every way, but without Force, and too weak to affect the Sense; yet how small and subtle are the Images that are formed from these, no one can conceive or express.

[g] BUT lest you should think, that the Images that fly off from the Surface of Bodies, are the only Things that wander abroad, there are other Shapes that are fashioned of their own accord, and are produced in the lower Region we call the Air; these are framed in various Manners, are carried upward, and being very subtle and less compact in their Contexture, are ever changing their Figure, and assume all Variety of Forms. Thus we see the Clouds sometimes thicken in the Sky, darkning the serene Face of the Heavens, and wounding the Air by the Violence of their Motion; now the Shape of Giants seem to fly abroad, *Prodigies.*

[f] Since an Image consists only of those Particles that fly away from the Surface of Bodies, it surpasses all Belief, how subtle and tenuious an Image must be, especially since in a great Length of Time, nothing can be perceived to be exhaled or worn away.

[g] He speaks now of another Sort of Images, which are certain Compositions or Coagmentations, that are formed in the Air of their own accord as so many Clouds, and do not indeed flow from the Things which they represent.

Ora volare videntur, & umbram ducere latè :
Interdum magni montes, avolſaque ſaxa
Montibus anteire, & ſolem ſuccedere præter :
Inde alios trahere, atque inducere bellua nimbos.
Nunc ea quàm facili, & celeri ratione genantur,
Perpetuòque fluant ab rebus, lapſaque cedant.
Semper enim ſummum quidquid de rebus abundat,
Quòd jaculentur : & hoc alias cùm pervenit in res,
Tranſit, ut in primis Veſtem : Sed in aſpera Saxa,
Aut in materiem ut Ligni pervenit ; ibi jam
Scinditur, ut nullum Simulacrum reddere poſſit.
At cùm, ſplendida quæ conſtant, oppôſta fuerunt,
Denſaque, ut in primis Speculum 'ſt : Nihil accidit horum,
Nam neque uti veſtem poſſit tranſire, neque ante
Scindi, quàm meminit lævor præſtare ſalutem.
Quapropter fit, ut hinc nobis Simulacra genantur,
Et quamvis ſubitò, quovis in tempore, quamque
Rem contra Speculum ponas, apparet Imago :
Perpetuò fluere ut noſcas è corpore ſummo
Texturas rerum tenueis, tenueiſque figuras.
Ergo multa brevi ſpatio Simulacra genuntur,
Ut meritò celer his rebus dicatur origo.
Et quaſi multa brevi ſpatio ſummittere debet
Lumina Sol, ut perpetuò ſint omnia plena :
Sic à rebus item ſimili ratione nèceſſe 'ſt
Temporis in puncto rerum Simulacra ferantur

and project their Shadows all round; and then huge Hills, and Rocks torn from the Mountain-Top, are born before the Sun, and hide his Light. Others again advance and represent the Shape of Monsters wandring through the Sky.

Reflection.

NOW learn in how easy and swift a Manner these Images are produced; how they continually fly and fall off from the Surface of Bodies; for there is always a Store of Forms upon the Outside of Things ready to be thrown off: These when they light upon some Things pass through them, as a Garment for instance; but when they strike upon sharp Rocks, or upon Wood, they are immediately broken and divided, so that no Image can be reflected; but when they are opposed by dense and polished Bodies, such as Looking-glass, then nothing of this happens; for they can neither pass through this as through a Garment, nor are they divided, before the Glass preserves their Figure perfect and intire. Hence it is, that these Forms are presented to our Sight; and place a Thing ever so suddenly, and in a Moment of Time, before the Glass, and the Image instantly appears. So that you find, there are subtle Textures of Things, and subtle Images continually flowing from the Surface of Bodies; and therefore many of these Forms are produced in a short Space of Time, and may be justly said to receive their Being from a very swift Motion.

[h] AND as the Sun is obliged to emit many of its Rays in an Instant, that the whole Air might be full of Light, so many Images of Things must needs be carried off in the smallest Point of Time,

[h] That all Things may be full of Light, Rays must be continually emitted from the Sun; for the same Reason Images must likewise be perpetually flying away from Bodies; for which way soever you turn the Mirrour, the Images of the opposite Things appear, nor do they ever disappear so long as those Things keep their Places.

Multa modis multis in cunctas undique parteis :
Quandoquidem Speculum queiscunque obvertimus oris,
Res ibi respondent simila forma, atque colore.
Præterea, modò quom fuerit liquidissima cœli
Tempestas perquàm subitò fit turbida fœde
Undique, uti tenebras omneis Acherunta rearis
Liquisse, & magnas cœli complésse cavernas.
Usque adeò tetra nimborum nocte coorta,
Impendent atræ formidinis ora superne.
Quorum quantula pars sit Imago, dicere nemo'st,
Qui possit, neque eam rationem reddere dictis.
Nunc age, quàm celeri motu Simulacra ferantur,
Et quæ mobilitas ollis tranantibus auras
Reddita sit, longo ut spatio brevis hora teratur,
In quemcunque locum diverso numine tendunt,
Suavidicis potiùs, quàm multis versibus edam :
Parvus ut est Cycni melior canor, illum Gruum quàm
Clamor, in ætheriis dispersus nubibus Austri.
Principio, persæpe leveis res, atque minutis
Corporibus factas, celereis licet esse videre.
In quo jam genere'st Solis lux, & vapor ejus,
Propterea quia sunt è primis facta minutis :
Quæ quasi truduntur, perque Aëris intervallum
Non dubitant transire, sequentì concita plaga.
Suppeditatur enim confestim lumine lumen,
Et quasi protelo stimulatur fulgure fulgur,
Quapropter Simulacra pari ratione necesse 'st
Immemorabile per spatium transcurrere posse
Temporis in puncto : primùm quòd parvola causa
Est procul à tergo quæ provehat, atq; propellat :
Deinde, quòd usque adeo textura prædita rara
Mittuntur, facilè ut quasvis penetrare queant res,
Et quasi permanare per Aëris intervallum.

Præterea,

and ſcatter'd every way abroad; for place your Glaſs in what manner you pleaſe, the Things appear in the ſame Colour and Figure they really are.

So often, when the Face of the Sky is moſt ſerene and bright, it becomes on all Sides black and horrid of a ſudden, that you would think the whole Body of Darkneſs had left the Regions below, and filled the wide Arch of Heaven; ſo dreadful does the Night appear from driving Clouds, and ſcatters gloomy Terror from above; but how ſmall in Compariſon of theſe Clouds, are the Images of Things, no one can conceive or expreſs.

The Swiftneſs of the Images

AND now, with how ſwift a Courſe theſe Images are carried on, how ſuddenly they make their Paſſage through the Air, how they out-ſtrip dull Time, wherever by various Motion they intend their Way, I chooſe in ſweeteſt Numbers than in tedious Verſe to ſhew: As the Swan's ſhort Song is more melodious than the harſh Noiſe of Cranes, ſcattered by Winds through all the Air.

FIRST then; we obſerve, that light Things, that are formed of ſmall Particles, are very ſwift in their Motion; of this Sort, are the Rays and Heat of the Sun; becauſe they are compoſed of very minute Seeds, which are eaſily thruſt forward, as it were, through the interjacent Air, the following urging on the Part that went before; for one Beam of Light is inſtantly ſupplied by another, and every Ray is preſſed on by another behind. By the ſame Rule, the Images may paſs through an unaccountable Space in a Moment of Time: Firſt, becauſe there is always a Force behind to drive and urge them forward, and then their Texture, as they fly off, is ſo thin and ſubtle, that they can pierce through any Bodies, and, as it were, flow through the Air that lies between.

Præterea, ſi, quæ penitus Corpuſcula rerum
Ex alto in terras mittuntur, Solis uti lux,
Ac vapor, hæc puncto cernuntur lapſa diei
Per totum cœli ſpatium diffundere ſeſe:
Perque volare mare, ac terras, cœlumque rigare
Quòd ſupera'ſt: Ubi tam volucri hæc levitate feruntur.
Quid? quæ ſunt igitur jam prima in fronte parata
Cum jaciuntur, & emiſſum res nulla moratur,
Nonne vides citiùs debere, & longiùs ire:
Multiplexque loci ſpatium tranſcurrere eodem
Tempore, quo Solis pervolgant lumina cælum?
Hoc etiam in primis ſpecimen verum eſſe videtur,
Quàm celeri motu rerum Simulacra ferantur,
Quòd ſimul ac primùm ſub divo ſplendor Aquaï
Ponitur, extemplo, cælo ſtellante, ſerena
Sidera reſpondent in Aqua radiantia mundi.
Jamne vides igitur, quàm puncto tempore imago
Ætheris ex oris ad terrarum accidat oras?
Quare etiam atque etiam mitti hæc fateare neceſſe'ſt
Corpora, quæ feriant oculos, viſumque laceſſant:
Perpetuoque fluunt certis ab rebus Odores:
Frigus ut à fluviis, Calor à ſole, Æſtus ab undis

Æquoris,

[i] BESIDES, if thoſe Corpuſcles that lie in the inward Parts of Bodies are diſcharged from above down upon the Earth, ſuch as the Light and Heat of the Sun; if theſe, we obſerve, deſcend in a Point of Time, and ſpread themſelves through all the Expanſion of the Air, and fly over the Sea, the Earth, and the upper Regions of the Heavens; if theſe are diffuſed with ſuch wonderful Celerity, what ſhall we ſay? Thoſe Particles that are always ready upon the utmoſt Surface of Things, when they are thrown off, and have nothing to obſtruct their Motions, don't you ſee how thoſe may fly ſwifter, and go further, and paſs through a much greater Space in the ſame Time than the Beams of the Sun take up to make their way through.

ANOTHER notable Inſtance, which fully proves with how ſwift a Motion the Images are carried on, is this; As ſoon as a Bowl of clear Water is placed in the open Air, in a Star-light Night, the ſhining Stars are ſeen twinkling in the ſtill Water; Don't you ſee therefore in what a Point of Time the Images deſcend upon the Earth from the upper Regions of the Air?

AGAIN then, and again, you muſt allow that [k] Particles are perpetually flowing from the Surface of Bodies, which preſent themſelves to our Eyes and ſtrike our Sight: From ſome Bodies a Train of Smells are always flying off; ſo Cold is emitted from the Rivers, Heat from the Sun, a

[i] The Images paſs more ſwiftly than the Rays of the Sun, becauſe they are more ſubtle, and what conduces much to their Celerity, they flow from the Surface of Things, and eaſily diſengage themſelves and get off; but Heat and Light are emitted from the inward Parts of the Sun, and therefore cannot ſo eaſily get free.

[k] This Flow or Streaming of Images into the Eyes, he ſays, muſt be granted, becauſe certain Effluviums from other Things inſinuate themſelves into all the other Senſes.

Æquoris, exesor mœrorum litora circùm.
Nec variæ cessant Voces volitare per auras:
Denique in os salsi venit humor sæpe Saporis,
Cùm mare versamur propter: Dilutaque contra
Cùm tuimur misceri absinthia, tangit amaror.
Usque adeo omnibus ab rebus res quæque fluenter
Fertur: & in cunctas dimittitur undique parteis,
Nec mora, nec requies inter datur ulla fluendi:
Perpetuò quoniam sentimus, & omnia semper
Cernere, Odorari licet, & sentire Sonorem.
Præterea, quoniam manibus tractata figura
In tenebris quædam, cognoscitur esse eadem, quæ
Cernitur in luce, & claro candore; necesse 'st
Consimili causa Tactum, Visumque moveri.
Nunc igitur, si Quadratum tentamus, & id nos
Commovet in tenebris; in luci quæ poterit res
Accidere ad speciem, Quadrata nisi ejus imago?
Esse in Imaginibus quapropter causa videtur
Cernendi, neque posse sine his res ulla videri.
Nunc ea, quæ dico, rerum Simulacra feruntur
Undique, & in cunctas jaciuntur didita parteis;
Verùm, nos oculis quia solis cernere quimus,
Propterea fit, uti, speciem quò vertimus, omnes
Res ibi eam contra feriant forma, atque colore.
Et quantùm quæque à nobis res absit, Imago
Efficit ut videamus, & internoscere curat.
Nam cùm mittitur, extemplo protrudit, agitque
Aëra, qui inter se cumque 'st, oculosque locatus;

Isque

ſalt Vapour from the Water of the Sea that eats through Walls along the Shore, and Sounds are always flying through the Air. Laſtly, As we walk upon the Strand a ſalt Taſte offends our Mouth; and when we ſee a Bunch of Wormwood bruiſed, the Bitterneſs ſtrikes upon the Palate: So plain it is that ſomething is continually flowing off from all Bodies, and is ſcattered all about; there is no Intermiſſion; the Seeds never ceaſe to flow, becauſe we ſtill continue to feel, to ſee, to ſmell, and hear.

BESIDES, ſince any Figure we feel with our Hands in the Dark, we know to be the ſame we before ſaw by Day, and in the cleareſt Light, the Touch and Sight muſt needs be moved by the ſame Cauſe; and therefore, if we feel a quadrangular Figure, and diſtinguiſh its Shape in the Dark, what can preſent that Shape to us in the Light but its quadrangular Image? The Cauſe therefore of our Sight muſt ariſe from the Images, nor indeed can we diſtinguiſh any thing without them.

Now theſe Images I am ſpeaking of are carried about every Way, and are thrown off and ſcattered on all Sides; and therefore it is, ſince with our Eyes alone we are able to ſee, that which way ſoever we turn our Eyes, the Objects ſtrike upon them in their proper Form and Colour.

How we diſcover the Diſtance of Objects.

THE Image likewiſe is the Cauſe that we diſcover, and takes care to ſatisfy us at what [1] Diſtance Bodies are removed from us; for as ſoon as it is emitted, it inſtantly thruſts forward, and drives on the Air that is placed between itſelf and

[1] The Image ſtriving to get to the Eyes, drives forward all the Air before it: Now this Stream of Air is longer or ſhorter, as the Object is more or leſs diſtant; but the longer or ſhorter that Stream of Air is which protruded by the Image ſtrikes the Eye, ſo much longer or ſhorter the Interval of Space between the Object and the Eye muſt be allowed to be.

the

Isque ita per nostras acies perlabitur omnis:
Et quasi perterget pupillas, atque ita transit.
Propterea fit, uti videamus quàm procul absit
Res quæque: & quantò plus aëris antè agitatur,
Et nostros oculos perterget longior aura,
Tam procul esse magis res quæque remota videtur:
Scilicet hæc summè celeri ratione geruntur,
Quale sit ut videamus: Et unà quàm procul absit.
Illud in his rebus minimè mirabile habendum 'st,
Cur ea, quæ feriant oculos Simulacra, videri
Singula cùm nequeant, res ipsæ perspiciantur:
Ventus enim quoque paullatim cùm verberat, & cùm
Acre ferit Frigus, non privam quamque solemus
Particulam Venti sentire, & Frigoris ejus;
Sed magis universum: fierique perinde videmus
Corpore tum plagas in nostro, tanquam aliquæ res
Verberet, atque sui det sensum corporis extra.
Præterea, Lapidem digito cùm tundimus, ipsum
Tangimus extremum Saxi, summumque colorem.
Nec sentimus eum tactu, verùm magis ipsam
Duritiem penitùs Saxi sentimus in alto.
Nunc age, cur ultra Speculum videatur Imago
Percipe, nam certè penitus remmota videtur.

Quod

the Sight; this Stream of Air then glides to the Eye, and as it were grates gently upon the Ball, and ſo paſſes through. Hence it is that we perceive how far Things are diſtant from our Sight; for the more Air there is that is driven before the Image, and the longer the Stream of it is that rubs upon the Ball, the longer the Interval of Space between the Object and the Eye muſt be allowed to be. All this is done with the utmoſt Celerity; for we ſee what the Object is, and know its Diſtance in the ſame Inſtant.

NOR are we to think it at all ſtrange in this Caſe, that the Objects may be perfectly ſeen, and yet the Images that ſingly ſtrike the Eye cannot themſelves be diſcovered; for when the Wind blows gently upon us, and its ſharp Cold pierces our Bodies, we cannot diſtinguiſh the ſeveral Particles of Wind or Cold that ſo affect us, but we are ſenſible of their whole Strength together; we perceive their Blows laid upon our Bodies, as if ſomething were beating us, and made us feel the Effects of its outward Force upon us. And ſo, when we ſtrike a Stone with our Fingers, we touch the Surface and outmoſt Colour of the Stone; but then we feel nothing of the Colour or Surface by our Touch, we perceive no more than the Hardneſs of the Stone that lies within.

AND now learn why the [m] Image is always ſeen beyond the Glaſs, for it certainly appears at a remote Diſtance from us. For Inſtance: When *Why the Image appears beyond the Glaſs.*

[m] The Eye knows the Diſtance of the Things ſeen by means of the Air that is driven by the Image to the Eye; now when two Airs are driven, the Interval muſt of neceſſity be more extended and ever doubled; but the Image of the Glaſs (for we ſee the Glaſs itſelf, as well as the Thing whoſe Image is reflected) protrades one Air, and the Image reflected another. And this is the Reaſon why the Image appears not to be in the Surface of the Glaſs, but as if it were within and beyond it.

you

Quod genus illa, foris quæ verè transpiciuntur,
Janua cùm per se transpectum præbet apertum,
Multa facitque foris ex ædibus ut videantur.
Is quoq; enim duplici, geminoq; fit Aëre Visus.
Primus enim 'st, citra posteis qui cernitur Aër.
Inde fores ipsæ dextra, lævaque sequuntur.
Post extraria lux oculos perterget, & Aër
Alter, & illa, foris quæ verè transpiciuntur.
Sic ubi se primùm Speculi projecit Imago,
Dum venit ad nostras acies, protrudit, agitque
Aëra, qui inter se cunque 'st oculosque locatus:
Et facit, ut priùs Hunc omnem sentire queamus,
Quàm Speculum: Sed ubi Speculum quoque sensimus ipsum
Continuò à nobis in id hæc, quæ fertur, Imago
Pervenit, & nostros oculos rejecta revisit:
Atque alium præ se propellens Aëra volvit,
Et facit, ut priùs hunc, quàm se, videamus: eoque
Distare à Speculo tantùm remmota videtur.
Quare etiam atq; etiam minimè mirarier est par
Illis, quæ reddunt Speculorum ex æquore visum,
Aëribus binis, quoniam res consit utroque.
Nunc ea, quæ nobis membrorum dextera pars est,
In Speculis fit ut in læva videatur, eo quòd

Planitiem

you are placed in an inner Room, and Things are ſeen at a Diſtance from you; when the Door is open, and gives you a clear Proſpect, and allows you plainly to diſcover any Object without, your Sight in this caſe is formed, as I may ſay, by a double Air; the Air that lies within the Door is the firſt; then the Door is placed in the Middle between, and then the Light without that rubs gently upon the Eye, this is the other Air; and at length the Object is diſcovered. So, when the Image of the Glaſs firſt flies off, as it makes a Paſſage to our Sight, it ſtrikes forward, and drives on the Air that lies between itſelf and the Eye, ſo that we feel all this interjacent Air before we ſee any thing of the Glaſs; but when we diſcover the Glaſs, the Image that is emitted from us inſtantly flies to it, and being reflected and ſent back, returns again to our Sight, and forces the Air that is before it; which is the Reaſon that we perceive this interjacent Air before the Image is ſeen by us. Now when two Airs are driven (the Image of the Glaſs forcing on one, and the Image reflected another) the Interval muſt of neceſſity be more extended, and even doubled. Hence it is that the Image appears not in the Surface of the Glaſs, but beyond it; and therefore we are not to wonder at all, that the Images of Things are reflected to our Sight, from the Surface of a ſmooth Glaſs, by means of a double Air, becauſe it appears plainly that they are ſo.

BUT more [n]; That Part of the Body that is the Right Side, appears in the Glaſs to be the Left; *Why the Image is tranſpoſed.*

[n] Since the Image flows from us, and goes ſtraight forward, it ought as it goes away to ſhew us its hinder Parts, ſo that the Right may anſwer to the Right, and the Left to the Left. He anſwers the Objection by this Example: Take (ſays he) a Maſk made of Clay, not harden'd, but while it is yet

Planitiem ad Speculi veniens cùm offendit Imago,
Non convertitur incolumis ; ſed recta retrorſum
Sic eliditur, ut ſiquis priùs arida quàm ſit
Cretea perſona, adlidat pilæve, trabive :
Atque ea continuò rectam ſi fronte figuram
Servet, & eliſam retro ſeſe exprimat ipſa :
Fiet ut, ante oculus fuerit qui dexter, hic idem
Nunc ſit lævus, & è lævo ſit mutua dexter.
Fit quoque de Speculo in Speculum ut tradatur Imago :
Quinque etiam, ſexve ut fieri Simulacra ſuërint.
Nam quæcunq; retro parte interiore latebunt :
Inde tamen, quamvis tortè, penituſque remota,
Omnia per flexos aditus educta licebit
Pluribus hæc Speculis videantur in ædibus eſſe.
Uſque adeo è Speculo in Speculum tralucet imago,
Et cùm læva data 'ſt, ſit rurſum dextera fiat :
Inde retrorſum reddit ſe, & convertit eodem :
Quinetiam, quæcunque latuſcula ſunt Speculorum

Adſimili

Left; becauſe the Image, when it ſtrikes upon the Surface of the Glaſs, is not reflected again unchanged, but is turned a different Way about. For Inſtance: Take a Maſk made of Clay, before it be dry, and daſh it againſt a Pillar or Beam; if it preſerves its Figure intire, and appears inverted only ſo that the Face fills up the Hollow, the Event will be, that the Right Eye will now be the Left, and the Left the Right.

AND then it may be contrived that the [o] Image ſhall paſs from one Glaſs into another, ſo that five or ſix Images ſhall be reflected at once; and Objects that are placed backwards in the inward Part of the Houſe, let them be ever ſo much out of Sight, and the Turnings ever ſo crooked, they may be all drawn out through the winding Paſſages, and by the placing of many Glaſſes be perfectly diſcovered. The Image may be ſo tranſferred from one Glaſs into another, that it will change its Left into its Right; but when it is again reflected from the ſecond Glaſs into the third, it will reſume its Left Part again, and will continue to change in the ſame manner as it paſſes into all the Glaſſes that follow. *Images from one Glaſs to another.*

BUT in Glaſſes joined together in the [p] Convex *Convex Glaſſes.*

yet moiſt, and daſh it againſt a Beam or Pillar, ſo as to invert it backwards, that the Face may fill up the Hollow; and by this you may imagine, that Images being, as they are, very tenuious Subſtances, may by daſhing againſt the Glaſs be inverted backwards in like manner.

[o] Each Image flies away from the Object, and the Departure of the firſt is ſupplied by the coming of a ſecond, in a perpetual and never-ceaſing Flux; for the Image behind impels the Image before, and thus they run in a ſucceſſive Courſe, and urge on their predeceſſor Images; ſo that the Image which we this Moment ſee in the laſt Glaſs, was but juſt now in the firſt, and a new ſucceeds in the room of that which went laſt away; and thus a perpetual Succeſſion of Images is made from Glaſs to Glaſs.

[p] The Pillar'd Convex is one of the ſort of Glaſſes that reſtores the Image after the uſual manner.

Figure

Adſimili lateris flexura prædita noſtri:
Dextera ea propter nobis Simulacra remittunt,
Aut quia de Speculo in Speculum transfertur Imago,
Inde ad nos eliſa bis advolat; aut etiam quòd
Circumagitur, cùm venit Imago, propterea quòd
Flexa figura docet Speculi convertier ad nos.
Indugredi porro pariter Simulacra, pedemque
Ponere nobiſcum credas, geſtumque imitari:
Propterea, quia de Speculi qua parte recedas,
Continuò nequeunt illinc Simulacra reverti:
Omnia quandoquidem cogit natura referri,
Ac reſilire ab rebus ad æquos reddita flexus.
Splendida porro oculi fugitant, vitantque tueri:
Sol etiam cæcat, contra ſi tendere pergas,
Propterea, quia vis magna 'ſt ipſius: & altè
Aëra per purum graviter Simulacra feruntur,
Et feriunt oculos turbantia compoſituras.
Præterea, Splendor, quicunque 'ſt acer, adurit
Sæpe oculos, ideo quòd ſemina poſſidet ignis
Multa, dolorem oculis quæ gignunt inſinuando.
Lurida præterea fiunt quæcunque tuentur
Arquati, quia luroris de corpore eorum
Semina multa fluunt Simulacris obvia rerum,
Multaque ſunt oculis in eorum denique miſta,
Quæ contage ſua palloribus omnia pingunt.
E tenebris autem quæ ſunt in luce tuemur,
Propterea, quia cùm proprior caliginis Aër

Ater

Figure of a Pillar, the Side of the Image reflected is returned ſo, that the Right Part of the Image anſwers to the Right of the Object or Thing ſeen; either becauſe the Image, being transferred from one Glaſs into another, is reflected twice; or that the Image, when it comes to us, is turned about; for, that the Face is turned about as it paſſes backwards, we learn from the Figure of the Glaſs.

Besides, you would believe that the Image moves with us, and attends all our Steps, and imitates our Geſtures; becauſe, when you retire from any Part of the Glaſs, the Image cannot be reflected from that Part; for Nature ordains, that all Images that are emitted from Bodies, ſhould be returned and reflected by equal Angles.

The Eyes, you obſerve, fly and avoid a glaring Object; the Sun likewiſe blinds you if you look too intenſely againſt it, becauſe its Force is great, and its Images are diſcharged from above through the pure Air, and ſtrike violently upon the Eyes, and diſturb and looſen their Contexture; beſides, a Brightneſs too powerful for the Sight, often burns the Eye; becauſe it contains many Seeds of Fire, which piercing the Ball, give it ſenſible Pain.

And then, Whatever a Perſon looks upon that has the Yellow Jaundice, becomes pale and lurid; becauſe many lurid Seeds flow from ſuch a Body, and meet with the Images of Things as they advance. And further, There are many Seeds within the Eyes of One ſo diſtempered, which ſtain all Things with their Infection, and make them look pale.

Again, If we are placed in the Dark, we ſee Objects that are in the Light; [q] becauſe when the dark

[q] When the lucid Air follows the dark, it, by reaſon of its Subtilty, purges and cleanſes the Pores of the Eye, and makes room for the Images to enter; but when the dark Air

Ater inît oculos prior, & poſſedit apertos:
Inſequitur candens confeſtim lucidus Aër,
Qui quaſi purgat eos, ac nigras diſcutit umbras
Aëris illius: Nam multis partibus hic eſt
Mobilior, multiſque minutior, & mage pollens.
Qui ſimul atque vias oculorum luce replevit,
Atque patefecit quas ante obſederat ater:
Continnò rerum Simulacra adaperta ſequuntur
Quæ ſita ſunt in luce, laceſſuntque, ut videamus.
Quod contra facere in tenebris à luce nequimus,
Propterea, quia poſterior caliginis Aër
Craſſior inſequitur, qui cuncta foramina complet:
Obſiditque vias oculorum, ne Simulacra
Poſſint ullarum rerum conjecta moveri.
Quadrataſque procul turreis cùm cernimus urbis:
Propterea fit uti videantur ſæpe rotundæ,
Angulus obtuſus quia longè cernitur omnis,
Sive etiam potiùs non cernitur; ac perit ejus
Plaga, nec ad noſtras acies perlabitur ictus:
Aëra per multum quia dum Simulacra feruntur,
Cogit hebeſcere eum crebris offenſibus Aër.
Hinc, ubi ſuffugit ſenſum ſimul angulus omnis,
Lït, quaſi tornata ut ſaxorum ſtructa tuantur:
Non tamen ut coram quæ ſunt, verèque rotunda,
Sed quaſi adumbratim paullum ſimulata videntur.
Umbra videtur item nobis in Sole moveri,
Et veſtigia noſtra ſequi, geſtumque imitari,

(*Aëra*

dark Air, which is nearer, firſt enters and takes Poſſeſſion of the open Eyes, the bright clear Air immediately follows, which as it were purges the Eye, and diſſipates the Darkneſs the duſky Air had infuſed into it; for this lucid Air is by many Degrees more apt to move, is more ſubtle, and has more Force. This, as ſoon as it has filled the Paſſages of the Eyes with Light, and opened thoſe Pores that the dark Air had ſtopped before, the Images of Things conveyed in the Light immediately follow, and ſtrike upon the Eye, and move the Sight. But if we are placed in the Light, we cannot diſcover Objects in the Dark; becauſe a Train of dark and thicker Air follows the bright, which is neareſt the Eye, and ſtops up all the Pores, and ſo choaks up the Paſſages of the Sight, that the Images of Things cannot be moved or received into it.

FURTHER, When we ſee the ſquare Towers of a City at a Diſtance, they commonly appear round to us; becauſe all Angles, ſeen far off, ſhew obtuſe, or rather they do not ſhew at all: Their Strokes die away, and the Blows never reach our Eyes; for, as the Images are carried through a long Tract of Air, the Air beats upon them continually in their Paſſage, and ſo wears off their Corners. Hence it is that, ſince no manner of Angle ſtrikes the Eye, the ſtony Fabrick appears of a circular Figure; yet that Roundneſs is not ſo diſtinct as if the Object itſelf were really round, and ſeen at a ſmall Diſtance; but it bears a kind of Reſemblance to ſuch a Figure, yet is not completely ſo.

OUR Shadows ſeem to move with us in the Sun, to follow our Steps, and imitate our Geſtures

follows the bright, the Paſſages of the Eye are ſo cloſed and choaked up by that dull and heavy Air, that it becomes incapable to receive the Images of Things that offer themſelves to it.

(Aëra si credas privatum lumine posse
Indugredi, motus hominum, gestusque sequentem.
Nam nihil esse potest aliud nisi lumine cassus
Aër, id, quod nos Umbram perhibere suëmus).
Nimirum, quia Terra locis ex ordine certis
Lumine privatur Solis, quacunque meantes
Officimus: repletur item, quod liquimus ejus.
Propterea fit, uti videatur, quæ fuit Umbra
Corporis, è regione eadem nos usque secuta.
Semper enim nova se radiorum lumina fundunt,
Primaque dispereunt, quasi in ignem Lana trahatur.
Propterea facilè & spoliatur lumine Terra:
Et repletur item, nigrasque sibi abluit Umbras.
Nec tamen hìc Oculos falli concedimus hilum:
Nam, quocunque loco sit Lux, atque Umbra, tueri
Illorum est, eadem verò sint lumina, necne:
Umbraque, quæ fuit hic, eadem num transeat illuc:
An potiùs fiat, paullo quod diximus antè:
Hoc Animi demum Ratio discernere debet:
Nec possunt Oculi naturam noscere rerum.
Proinde Animi vitium hoc Oculis adfingere noli.

(if you can ſuppoſe that Air, void of Light, is able to walk, and to follow the Motions and Geſtures of the Body; for what we uſually call *Shadow*, can be nothing but the Air deprived of Light). The Reaſon is, becauſe as we walk we hinder the Rays of the Sun from ſtriking upon a certain Part of the Earth, which by that means becomes dark; but that, as we leave the Place it is covered with Light; and therefore it is that the Shadow of the Body over-againſt it follows us in all our Motions [r]. For a Train of new Rays are continually flowing from the Sun, and the firſt die away like Threads of Wooll drawn through a Flame; and by this means that Part of the Earth is ſoon deprived of Light, and again becomes bright, and diſcharges the black Shade that hung upon it.

[s] BUT in this caſe we are not in the leaſt to allow that the Eyes are deceived; it is their Buſineſs to diſcover only where the Light and Shade are, but to determine nothing whether the Light be the ſame, or the Shadow be the ſame that moves from one Place to another, or whether it be as we explained above. It is the Office of the Mind and Judgment to diſtinguiſh This; for the Eyes can know nothing of the Nature of Things, and therefore you are not to impute to them the Failures of the Mind.

[r] He teaches us, by an Example, in what manner new Rays are continually flowing from the Sun's Orb, and how they ſupply the Place of the former that vaniſh away, *viz.* as it were like Wooll drawn through a Flame; for then the Wooll that is firſt drawn would be conſumed by the Fire, whilſt other Wooll is in the mean time drawing through it. Thus *Lambinus* explains this Paſſage, but it is ſtill obſcure.

[s] He undertakes to defend the Certainty of the Senſes, which (he ſays) receive the Images of Things juſt as they are brought to them, but all Errors proceed from the Judgment of the Mind; which he attempts to illuſtrate by many Examples.

Qua vehimur Navi, fertur, cùm ſtare videtur:
Quæ manet in ſtatione, ea præter creditur ire:
Et fugere ad puppim colles, campiq; videntur,
Quos agimus præter navim, veliſque volamus.
Sidera ceſſare ætheriis adfixa cavernis
Cuncta videntur: at adſiduo in ſunt omnia motu:
Quandoquidem longos obitus exorta reviſunt,
Cùm permenſa ſuo ſunt cælum corpore claro:
Solque pari ratione manere, & Luna videtur
In ſtatione, ea quæ ferri res indicat ipſa.
Exſtanteſque procul medio de gurgite Montes,
Claſſibus inter quos liber patet exitus, îdem
Apparent, & longè divolſi licet, ingens
Inſula conjectis tamen ex his una videtur.
Atria verſari, & circumcurſare columnæ
Uſque adeo fit uti pueris videantur, ubi ipſi
Deſierunt verti, vix ut jam credere poſſint,
Non ſupra ſeſe ruere omnia tecta minari.
Jamque rubrum tremulis jubar ignibus erigere altè
Cùm cœptat Natura, ſupraque extollere monteis;
Quos tibi tum ſupra Sol monteis eſſe videtur,
Cominus ipſe ſuo contingens fervidus igni,
Vix abſunt nobis miſſus bis mille ſagittæ;
Vix etiam curſus quingentos ſæpe veruti:
Inter eos, Solemque jacent immania ponti
Æquora, ſubſtrata ætheriis ingentibus oris:
Interjectaque ſunt terrarum millia multa,
Quæ variæ retinent gentes, & ſæcla ferarum.
At conlectus aquæ digitum non altior unum,
Qui lapides inter ſiſtit per ſtrata viarum,
Deſpectum præbet ſub terras impete tanto,
A terris quantum cæli patet altus hiatus:

Nubila

WHEN we are on Ship-board, the Veſſel drives on when it ſeems to ſtand ſtill, and when it lies at Anchor it ſeems to move; the Hills and Plains ſeem to fly and retire from us as we row, or ſcour with full Sails before the Wind.

AND thus all the Stars ſeem fixed in the vaulted Sky, when they are all in continual Motion: They riſe; and when they have meaſured the Heavens with their bright Orbs, they ſet again at an immenſe Diſtance. The Sun and Moon, by the ſame Rule, appear fixed, when Experience tells us that they move.

AND Mountains, ſtanding at a Diſtance from one another in the Middle of the Sea, ſo that a Fleet of Ships may ſail eaſily between them, appear like one continued Ridge of Rocks; and though widely ſeparated, yet ſhew like one vaſt Iſland, formed by all of them joined together.

SO Boys, when they have made themſelves giddy, ſo ſtrongly fancy that the Walls are turned about, and the Pillars run round, that, even when they ſtand ſtill, they can ſcarce believe but that the whole Houſe threatens to tumble upon their Heads.

THUS, when Nature begins to diſplay the bright Splendor of the Sun with trembling Light, and to raiſe it above the Top of the Mountains, that Hill over which the Sun juſt appears, and glowing ſeems to ſcorch with his Beams, is ſcarce two thouſand Bow-ſhot diſtant from us, perhaps not five hundred Caſts of a Dart; when yet, between that and the Sun lie many mighty Seas, ſpread under a vaſt Expanſion of the Heavens; many thouſand Leagues of Land lie between, poſſeſſed by many Nations, and the whole Race of wild Beaſts.

So a Puddle of Water, no deeper than one of your Fingers, that lies in the Street between the Stones, affords a Proſpect ſo deep under the Earth, as the Diſtance between the Earth and the wide Arch of

Nubila deſpicere, & cœlum ut videare videre, &
Corpora mirando ſub terras abdita cœlo.
Denique, ubi in medio nobis equus acer obhæſit
Flumine, & in rapidas amnis deſpeximus undas;
Stantis equi corpus tranſverſum ferre videtur
Vis, & in adverſum flumen contrudere raptim:
Et, quocunque oculos trajecimus, omnia ferri,
Et fluere adſimili nobis ratione videntur.
Porticus æquali quamvis eſt denique ductu,
Stanſque in perpetuum paribus ſuffulta columnis;
Longa tamen parte ab ſumma cùm tota videtur,
Paullatim trahit anguſti faſtigia coni,
Tecta ſolo jungens, atque omnia dextera lævis:
Donicum in obſcurum coni conduxit acumen.
In pelago nautis ex undis ortus, in undis
Sol fit uti videatur obire, & condere lumen:
Quippe ubi nil aliud niſi aquam, cœlumq; tuentur,
Ne leviter credas labefactari undique ſenſus.
At maris ignaris in portu clauda videntur
Navigia, apluſtris fractis, obnitier undis.
Nam quæcunq; ſupra rorem ſalis edita pars eſt
Remorum, recta 'ſt; & recta ſupernè Guberna:
Quæ demerſa liquore obeunt, refracta videntur
Omnia converti, ſurſumque ſupina reverti:
Et reflexa prope in ſummo fluitare liquore.
Raraque per cœlum cùm venti nubila portant
Tempore nocturno, tum ſplendida Signa videntur.
Labier adverſum nubeis, atque ire ſupernè

Longe

Heaven; ſo that you ſeem to look down upon the Clouds, to take a clear Survey of the Sky; and view with wonder the celeſtial Bodies contained in it, as they ſeem beneath the Earth.

Observe, When your mettled Horſe ſtands ſtill with you in the Middle of a River, and you look down upon the rapid Stream of the Water, the Force of the Current ſeems to drive your Horſe violently upwards, and hurry you ſwiftly againſt the Tide; and on which Side ſoever you caſt your Eyes, all Things ſeem to be borne along, and carried againſt the Torrent in the ſame manner.

A long Portico, though it be of equal Breadth from one End to the other, and reaches far, ſupported by Pillars of an equal Height; yet when you ſtand at one End, to take a View of its whole Extent, it contracts itſelf by degrees to a narrow Point at the further End; the Roof touches the Floor, and both Sides ſeem to meet, till it terminates at laſt in the ſharp Figure of a dark Cone.

The Sun, to Mariners, ſeems to riſe out of the Sea, and there again to ſet and hide his Light; for they ſee nothing but the Water and the Sky; and therefore you are not to conclude raſhly that the Senſes are at all deceived.

To thoſe who know nothing of the Sea, a Ship in the Port ſeems diſabled, and to ſtrive againſt the Waves with broken Oars; for that Part of the Oar and of the Rudder that is above the Water, appears ſtraight; but all below, being refracted, ſeems to be turned upwards, and to be bent towards the Top of the Water, and to float almoſt upon the Surface of it.

So, when the Winds drive the light Clouds along the Sky in the Night, the Moon and Stars ſeem to fly againſt the Clouds, and to be driven above

Longè aliam in partem, quàm quo ratione feruntur.
At si fortè oculo manus uni subdita subter
Pressit eum, quodam sensu fit, uti videantur
Omnia, quæ tuimur, fieri tum bina tuendo;
Bina Lucernarum florentia lumina flammis,
Binaque per totas ædeis geminare Supellex:
Et duplices Hominum facies, & corpora bina.
Denique cùm suavi devinxit membra sopore
Somnus, & in summa corpus jacet omne quiete:
Tum vigilare tamen nobis, & membra movere
Nostra videmur, & in noctis caligine cæca
Cernere censemus Solem, lumenque diurnum:
Concluſoque loco Cælum, Mare, Flumina, Monteis
Mutare, & campos pedibus transire videmur:
Et sonitus audire, severa silentia noctis
Undique cùm constent, & reddere dicta tacentes.
Cætera de genere hoc mirando multa videmus,
Quæ violare fidem quasi sensibus omnia quærunt
Nequicquam: quoniam pars horum maxima fallit
Propter opinatus Animi, quos addimus ipsi,
Pro visis ut sint, quæ non sunt sensibu' visa.
Nam nihil egregius, quàm res secernere apertas
A dubiis, Animus quas ab se protinus addit.
Denique, nil Sciri siquis putat, id quoque nescit,

above them in a Courſe quite oppoſite to that in which they naturally move.

AND if you chance to preſs with your Fingers under one of your Eyes, the Effect will be, that every thing you look upon will appear double, every bright Candle will burn with two Flames, and all the Furniture of the Houſe will multiply and ſhew double; every Face about you, and every Body will look like Two.

LASTLY, When Sleep has bound our Limbs in ſweet Repoſe, and all the Body lies diſſolved in Reſt, we think ourſelves awake; our Members move; and in the gloomy Darkneſs of the Night, we think we ſee the Sun and broad Day-light; and, though confined in Bed, we wander o'er the Heavens, the Sea, Rivers and Hills, and fancy we are walking through the Plains: And Sounds we ſeem to hear; and, though the Tongue be ſtill, we ſeem to ſpeak, when the deep Silence of the Night reigns all about us.

MANY more Things of this kind we obſerve and wonder at, which attempt to overthrow the Certainty of our Senſes, but to no Purpoſe; for Things of this ſort generally deceive us, upon account of the Judgment of the Mind which we apply to them, and ſo we conclude we ſee Things which we really do not; for nothing is more difficult than to diſtinguiſh Things clear and plain from ſuch as are doubtful, to which the Mind is ready to add its Aſſent, as it is inclined to believe every thing imparted by the Senſes.

LASTLY, [t] If any one thinks that he knows nothing, he cannot be ſure that he knows This,

[t] He falls upon the middle Academicks, of whom *Arceſilas* was Author; who introduced an incoherent kind of Philoſophy, and aſſerted that nothing could be known; for ſomething (as our Poet ſays) muſt be known, otherwiſe it could not be known that nothing can be known.

when

An Sciri poſſit, qui ſe nil Scire fatetur :
Hunc igitur contra mittam contendere cauſam,
Qui capite ipſe ſuo inſtituit veſtigia retrò.
Et tamen hoc quoque uti concedam, ſcire, at id ipſum
Quæram, (quom in rebus veri nil viderit antè)
Unde ſciat, quid ſit Scire, & Neſcire viciſſim :
Notitiam veri quæ res, falſique creârit ;
Et dubium certo quæ res differre probârit ?
Invenies primis ab Senſibus eſſe creatam
Notitiam veri, neque Senſus poſſe refelli :
Nam majore fide debet reperirier illud,
Sponte ſua veris quod poſſit vincere falſa.
Quid majore fide porro, quàm ſenſus haberi
Debet ? An ab ſenſu falſo Ratio orta valebit
Dicere eos contra, quæ tota ab Senſibus orta 'ſt ?
Qui niſi ſint veri, Ratio quoque falſa ſit omnis.
An poterunt Oculos Aures reprehendere ? an Aureis
Tactus ? an hunc porro Tactum Sapor arguet oris ?
An confutabunt Nares, Oculive revincent ?
Non (ut opinor) ita 'ſt : Nam ſeorſum quoique poteſtas
Diviſa 'ſt : ſua vis quoique 'ſt : ideoque neceſſe 'ſt,
Quod molle, aut durum eſt, gelidum, fervenſve, ſeorſum
Id molle, aut durum gelidum, fervenſve videri ;
Et ſeorſum varios rerum ſentire Colores,

when he confeſſes that he knows nothing at all. I ſhall avoid diſputing with ſuch a Trifler, who perverts all Things, and, like a Tumbler with his Head prone to the Earth, can go no otherwiſe than backwards.

And yet allow that he knows This, I would aſk (ſince he had nothing before to lead him into ſuch a Knowledge) whence he had the Notion, what it was to know, or not to know; what it was that gave him an Idea of Truth or Falſhood, and what taught him to diſtinguiſh between Doubt and Certainty?

But you will find that the Knowledge of Truth is originally derived from the [u] Senſes, nor can the Senſes be contradicted; for whatever is able, by the Evidence of an oppoſite Truth, to convince the Senſes of Falſhood, muſt be ſomething of greater Certainty than They. But what can deſerve greater Credit than the Senſes require from us? Will Reaſon, derived from erring Senſe, claim the Privilege to contradict it? Reaſon, that depends wholly upon the Senſes, which unleſs you allow to be true, all Reaſon muſt be falſe. Can the Ears correct the Eyes? or the Touch the Ears? or will the Taſte confute the Touch? or ſhall the Noſe or Eyes convince the reſt? This, I think, cannot be; for every Senſe has a ſeparate Faculty of its own; each has its diſtinct Powers; and therefore an Object, ſoft or hard, hot or cold, muſt neceſſarily be diſtinguiſhed as ſoft or hard, hot or cold, by one Senſe ſeparately, that is, the Touch. It is the ſole Province of another, the Sight, to perceive the Colours of Things, and the

[u] He attacks the ancient Academicks, who held the Mind to be the ſole Arbiter and Judge of Things, and eſtabliſhes the Senſes to be the ſole Arbitrators; For (ſays he) whatever can correct and confute what is falſe, muſt of neceſſity be the Criterion of Truth; and this is done by the Senſes only.

ſeveral

Et quæcunque coloribu' sunt conjuncta, necesse 'st.
Seorsus item Sapor oris habet vim, seorsus Odores
Nascuntur, seorsum Sonitus: ideoque necesse 'st,
Non possint alios alii convincere Sensus.
Nec porro poterunt ipsi reprendere sese,
Æqua fides quoniam debebit semper haberi.
Proinde, quod in quoque 'st his visum tempore, verum 'st.
Et, si non poterit ratio dissolvere causam,
Cur ea, quæ fuerint juxtim quadrata, procul sint
Visa rotunda; tamen præstat rationis egentem
Reddere mendosè causas utriusque figuræ,
Quàm manibus manifesta suis emittere quæquam;
Et violare fidem primam, & convellere tota
Fundamenta, quibus nixatur Vita, Salusque.
Non modò enim Ratio ruat omnis, Vita quoque ipsa
Concidat extemplo, nisi credere sensibus ausis,
Præcipiteisque locos vitare, & cætera, quæ sint
In genere hoc fugienda; sequi, contraria quæ sint.
Illa tibi est igitur verborum copia cassa
Omnis quæ contra sensus instructa, parata 'st.
Denique ut in Fabrica, si prava 'st, Regula prima,
Normaque si fallax rectis regionibus exit,
Et Libellà aliqua si ex parti claudicat hilum;
Omnia mendosè fieri, atque obstipa necessum 'st,
Prava, cubantia, prona, supina, atque absona tecta;
Jam ruere ut quædam videantur velle, ruantque,
Prodita judiciis fallacibus omnia primis.
Sic igitur Ratio tibi rerum prava necesse 'st,
Falsaque sit, falsis quæcunque ab Sensibus orta 'st.
Nunc alii Sensus quo pacto quisq; suam rem
Sentiat, haud quaquam ratio scruposa relicta 'st.

Principio

ſeveral Properties that belong to them. The Taſte has a diſtinct Office. Odours particularly affect the Smell, and Sound the Ears; and therefore it cannot be that one Senſe ſhould correct another, nor can the ſame Senſe correct itſelf, ſince an equal Credit ought to be given to each; and therefore whatever the Senſes at any time diſcover to us, muſt be certain.

AND though Reaſon is not able to aſſign a Cauſe why an Object that is really four-ſquare when near, ſhould appear round when ſeen at a Diſtance; yet, if we cannot explain this Difficulty, it is better to give any Solution, even a falſe one, than to deliver up all Certainty out of our Power, to break in upon our firſt Principle of Belief, and tear up all Foundations upon which our Life and Security depend; for not only all Reaſon muſt be overthrown, but Life itſelf muſt be immediately extinguiſhed, unleſs you give Credit to your Senſes: Theſe direct you to fly from a Precipice and other Evils of this ſort which are to be avoided, and to perſue what tends to your Security. All therefore is no more than an empty Parade of Words, that can be offered againſt the Certainty of Senſe.

LASTLY, As in Building, if the principal Rule of the Artificer be not true, if his Line be not exact, or his Level bear in the leaſt to either Side, every thing muſt needs be wrong and crooked, the whole Fabrick muſt be ill-ſhaped, declining, hanging over, leaning and irregular; ſo that ſome Parts will ſeem ready to fall and tumble down, becauſe the Whole was at firſt diſordered by falſe Principles. So the Reaſon of Things muſt of neceſſity be wrong and falſe, which is founded upon a falſe Repreſentation of the Senſes.

AND now, in what manner each of the other Senſes diſtinguiſhes its proper Object, is a Subject of no great Difficulty to explain.

AND

Principio, auditur Sonus, & Vox omnis, in Aureis,
Insinuata suo pepulere ubi corpore sensum.
Corpoream quoque enim Vocem constare fatendum 'st,
Et Sonitum, quoniam possunt impellere Sensus.
Præterradit enim Vox fauceis sæpe, facitque
Asperiora foras gradiens arteria Clamor.
Quippe, per angustum turba majore coorta
Ire foras ubi cæperunt primordia Vocum,
Scilicet expletis quoque janua raditur cris
Rauca viis, & iter lædit qua Vox it in auras.
Haud igitur dubium est, quin Voces, Verbaque constent
Corporeis è principiis, ut lædere possint.
Nec te fallit item, quid corporis auferat, & quid
Detrahat ex Hominum nervis, ac viribus ipsis
Perpetuus Sermo nigraï noctis ad umbram,
Auroræ perductus ab exoriente nitore;
Præsertim si cùm summo 'st clamore profusus:
Ergo corpoream Vocem constare necesse 'st,
Multa loquens quoniam amittit de corpore partem
Asperitas autem Vocis fit ab asperitate
Principiorum, & item lævor lævore creatur.
Nec simili penetrant Aureis primordia forma,
Quom Tuba depresso graviter sub murmure mugit,
Aut reboant raucum Retrocita cornua bombum:
Vallibus & Cycni gelidis orti ex Heliconis
Cùm liquidam tollunt lugubri voce querelam.
Hasce igitur penitus Voces cùm corpore nostro
Exprimimus, rectoque foras emittimus ore,
Mobilis articulat verborum dædala lingua;
Formaturaque labrorum pro parte figurat.

Atque

AND firſt, Sound and all Voices are heard when they enter the Ears, and ſtrike with their Bodies upon the Senſe; for we muſt allow that Sound and Voice are Bodies, becauſe they have Power to make Impreſſion upon the Senſe; for the Voice often ſcrapes the Jaws, and the Noiſe makes the Windpipe rough as it paſſes through. When the Seeds of Words begin to hurry in a Crowd through the narrow Nerves, and to ruſh abroad, thoſe Veſſels being full, the Throat is raked and made hoarſe, and the Voice wounds the Paſſage through which it goes into the Air. There is no Queſtion then but [x] Voice and Words conſiſt of corporeal Principles, becauſe they affect and hurt the Senſe.

YOU are likewiſe to obſerve how much a continual Speaking, from Morning to Night, takes off from the Body; how much it wears away from the very Nerves and Strength of the Speaker, eſpecially if it be delivered in the higheſt Stretch of the Voice. Of neceſſity therefore Voice muſt be a Body, becauſe the Speaker loſes many Parts from himſelf.

THE Roughneſs then of the Voice depends upon the Roughneſs of the Seeds, as the Smoothneſs is produced from ſmooth Seeds; nor are the Seeds of the ſame Figure that ſtrike the Ears when the Trumpet ſounds with grave and murmuring Blaſts, as when the Sackbut rings with its hoarſe Noiſe, or Swans in the cold Vales of *Helicon* ſing out with mournful Notes their ſweet Complaint.

WHEN therefore we preſs out this Voice from the Lungs, and ſend it abroad directly through the open Mouth, the nimble Tongue, with curious Art, faſhions it into Words, and the Motion of the Lips aſſiſts likewiſe in the Formation of them.

[x] Voice without doubt is a Body, becauſe it rakes and ſcrapes the Jaws, makes them rough and hurts them, and therefore muſt of neceſſity touch them; and whatever touches or is touched, is a Body.

Atque ubi non longum ſpatium 'ſt, unde illa profecta
Perveniat vox quæque, neceſſe 'ſt Verba quoque ipſa
Planè exaudiri, diſcernique articulatim.
Servat enim formaturam, ſervatque figuram.
At ſi interpoſitum ſpatium ſit longius æquo,
Aëra per multum confundi Verba neceſſe 'ſt,
Et conturbari Vocem, dum tranſvolat auras.
Ergo fit, Sonitum ut poſſis audire, neque hilum
Internoſcere Verborum ſententia quæ ſit,
Uſque adeo confuſa venit Vox, inque pedita.
Præterea, Edictum ſæpe unum perciet aureis
Omnibus in populo emiſſum præconis ab ore:
In multas igitur Voces Vox una repente
Diffugit, in privas quoniam ſe dividit aureis,
Obſignans formam verbis, clarumque ſonorem.
At quæ pars Vocum non aureis accidit ipſas,
Præterlata perit fruſtra diffuſa per auras:
Pars ſolidis adliſa locis, rejecta ſonorem
Reddit, & interdum fruſtratur imagine Verbi.
Quæ benè cùm videas, rationem reddere poſſis
Tute tibi atque aliis, quo pacto per loca ſola

Saxa

And where the Distance is not long from whence any Voice proceeds, the Words must of necessity be plainly heard and articulately distinguished, for in this Case the Voice preserves its proper Frame and Figure; but if the interjacent Space be more than it should be, the Words must needs be confused by reason of the Length of Air, and the Voice be disordered as it passes through. Hence it is that you may hear a Sound only, but discover nothing at all of the Meaning of the Words, the Voice comes so broken and obstructed.

Besides, [y] one Sentence delivered from the Mouth of a bawling Cryer, strikes the Ears of all about him; for the one general Voice, that is pronounced instantly, breaks instantly into innumerable little Voices, and so reaches every particular Ear, giving a proper Form and a distinct Sound to every Word.

But that Part of the Voice that does not reach the Ear, is diffused through the Air to no Purpose, but there dies; some Parts strike upon solid Places, and being reflected return a Sound, and sometimes disappoint us with the Eccho or Image of the Word.

If you well consider This, you will be able to account to yourself and others, why, in solitary Places, the Rocks regularly return Words the

[y] There is one whole or rather general Voice, which being pronounced from the Mouth, divides itself into innumerable other little Voices, which are wholly like one another; thus, when the Voice is uttered by the Speaker, the Formation of the Bodies that burst out of the Mouth is compressed, broken, and as it were ground to Pieces, in such a manner that it divides and goes away into minute Parts or little Voices, altogether alike and of a like Figure, which instantly leap abroad, and diffuse themselves through the Air or ambient Space, and still preserve that Likeness, till they reach the Ears of all that are within hearing; and thus the same Voice is at once heard by many, as all drink of the same Water who drink out of the same River.

Saxa pareis formas Verborum ex ordine reddant,
Palanteis comites cùm monteis inter opacos
Quærimus, & magna diſperſos voce ciemus.
Sex etiam, aut ſeptem loca vidi reddere Voces
Unam cùm jaceres: Ita colles collibus ipſis
Verba repulſantes iterabant dicta referre.
Hæc loca capripedes Satyros, Nymphaſque tenere
Finitimi fingunt, & Faunos eſſe loquuntur;
Quorum noctivago ſtrepitu, ludoque jocanti
Adfirmant volgò taciturna ſilentia rumpi,
Chordarumque ſonos fieri, dulceiſque querelas,
Tibia quas fundit digitis pulſata canentum:
Et genus Agricolûm latè ſentiſcere, cùm Pan
Pinea ſemiferi capitis velamina quaſſans,
Unco ſæpe labro calamos percurrit hianteis,
Fiſtula ſilveſtrem ne ceſſet fundere muſam.
Cætera de genere hoc monſtra, ac portenta loquuntur,
Ne loca deſerta ab Divis quoque fortè putentur

Sola

ſame with thoſe we ſpeak, while we ſeek our Companions wandering o'er the dark Mountains, or call after them aloud when they are diſperſed and loſe their Way. [z] I myſelf have ſeen Places that return ſix Words for one; the Hills ſo reverberate the Words from one another, that they ſeverally repeat them and ſend them back.

THE neighbouring People fondly imagine ſuch Places to be frequented by Goat-footed Satyrs and Nymphs, and tell Stories of the Fawns. They ſay, that the dead Silence of the Night is diſturbed by their late Revels and wanton Sports; that they hear the Sound of Muſick, and the ſoft Notes of the Harp, as the Artiſt touches and ſings to it together; that the Swains all about can diſtinguiſh plainly when [a] *Pan*, ſhaking his Garland of Pine-leaves upon his Head, with long-hung Lip, runs o'er the hollow Reeds, and ſo his Pipe prolongs his rural Song. They ſpeak of many other ſtrange Sights, and monſtrous Fables of the ſame kind; leſt, perhaps, they ſhould be thought to dwell in Places where the *Gods* never come, and therefore

[z] An Eccho is formed by the Reverberation of the vibrated Air, when it meets with a ſmooth and ſolid Body; for the Air, as well as other Mediums, muſt glance and reflect from Objects, if it cannot paſs through them. Thus it changes its firſt Determination, and is variouſly reflected, according to the various Situation of the Object upon which it ſtrikes. The Reaſon why the ſame Sound is ſeveral times reflected, is, becauſe there ſometimes happens to be ſeveral Places diſpoſed among themſelves, in ſuch a manner and at ſuch Diſtances one beyond the other, that the circular Undulations of the Air, in different Places and at different Diſtances, meeting with Bodies ſolid and impenetrable, the ſame Sound will be often rebounded, according to the Number and Site of the Objects; ſo that, after we have received the Sound reflected from the neareſt, we receive it likewiſe returned from thoſe that are more remote from us.

[a] *Pan* was repreſented with a Garland of Pine-leaves on his Head; in one Hand he bears a Pipe, made of ſeven Reeds joined together with Wax, of which he was the firſt Inventor.

Sola tenere: Ideo jactant miracula dictis.
Aut aliqua ratione alia ducuntur, ut omne
Humanum genus est avidum nimis auricularum.
Quod superest, non est mirandum, qua ratione
Quæ loca per nequeunt Oculi res cernere apertas,
Hæc loca per Voces veniant, Aureisque lacessant.
Conloquimur clausis foribus: quod sæpe videmus.
Nimirum, quia Vox per flexa foramina rerum
Incolumis transire potest, Simulacra renutant;
Persinduntur enim, nisi recta foramina tranant:
Qualia sunt vitri, species quæ travolat omnis.
Præterea, parteis in cunctas dividitur Vox,
Ex aliis aliæ quoniam gignuntur; ubi una
Dissiluit semel in multas exorta, quasi ignis
Sæpe solet scintilla suos se spargere in igneis,
Ergo replentur loca Vocibus, abdita retrò
Omnia quæ circùm fuerint, sonituque cientur.
At Simulacra viis directis omnia tendunt,
Ut sunt missa semel, quapropter cernere nemo
Se supra potis est; at Voces accipere extra.
Et tamen ipsa quoq; hæc, dum transit clausa viarum,
Vox obtunditur, atque aureis confusa penetrat:
Et Sonitum potiùs, quàm Verba, audire videmur.
Hæc, queis sentimus succum, lingua atque palatum,
Plusculum habent in se rationis, plusque operaï.

Principio

they invent wonderful Tales like these; or they are induced by some Reason or other, as Mankind in general are mighty eager after Prodigies.

In short, it is nothing strange, that those Places through which the Eye can see nothing, that through such the Voice can pass and strike the Ears. We can converse together in different Rooms, when the Doors are shut, as we frequently do, because Voice can pierce safely through the crooked Pores of Bodies, which Images cannot, for they are broken if the Passages are not straight; such are the Pores of Glass through which all sorts of Images freely find way.

Besides, [b] the Voice divides itself into several little Voices, and these are broken again into others, as soon as the first single Voice breaks into many more, like a Spark of Fire that leaps abroad into a Thousand; so that all Places about, even those behind you, are filled with Voice, and are moved by the Sound; but all Images direct their Course through straight Passages, as soon as they are thrown off from Bodies, and therefore no one can see any thing over his Head; you hear Words that are spoken without, yet even these, as they pass through the Doors that are shut, grow weak, and strike the Ears in a confused Manner, so that we rather seem to hear a Sound than to distinguish the Words.

Nor is the Account of the Tongue and Palate, by which we taste, a Subject of greater Nicety or more Difficulty to explain.

[b] The Voice divides itself and leaps abroad into little Voices, which diffuse and scatter themselves abroad on all Sides, so that they light into the Ears that are all around, and not only those that are placed in a direct Line from the Speaker; but no such Thing can happen to the Images which are broken in passing through tortuous Pores and Holes of Bodies. Yet the Voice itself, by penetrating through such Mazes and Windings, becomes weak, indistinct, and breaks into Murmurs.

Principio, ſuccum ſentimus in ore, cibum cùm
Mandendo exprimimus: ceu plenam ſpongiam aquaï
Si quis fortè manu premere, exſiccareque cœpit;
Inde, quod exprimimus, per caulas omne palati
Diditur, & raræ perplexa foramina linguæ.
Hæc ubi lævia ſunt manantis corpore Succi,
Suaviter attingunt, & ſuavitur omnia tractant
Humida linguaï circum ſudantia templa.
At contrà pungunt ſenſum, lacerantque coorta,
Quantò quæque magis ſunt aſperitate repleta.
Deinde voluptas eſt è ſucco in fine palati,
Cùm verò deorſum per fauceis præcipitavit;
Nulla voluptas eſt, dum diditur omnis in artus:
Nec refert quicquam, quo victu corpus alatur,
Dummodo, quod capias, concoctum didere poſſis
Artubus, & ſtomachi humectum ſervare tenorem.
Nunc aliis alius cur ſit Cibus, ut videamus,
Expediam; quareve, aliis quod triſte, & amarum'ſt,
Hoc tamen eſſe aliis poſſit prædulce videri.
Tantaq; in his rebus diſtantia, differitaſque'ſt,
Ut quod alîs Cibus eſt, aliis fuat acre venenum.
Eſt utique, ut Serpens hominis contacta ſalivis
Diſperit, ac ſeſe mandendo conficit ipſa.

Præterea,

AND first, We perceive a Taſte in the Mouth when we ſqueeze the Juice from our Food by chewing, as if we were to preſs a Spunge full of Water in our Hands to make it dry; then the Juice we draw out is ſpread over the Pores of the Palate, and through the crooked Paſſages of the ſpungy Tongue. When the Seeds of this flowing Juice are ſmooth, they gently touch, and affect all the moiſt and ſweating Surface of the Tongue with ſweet Delight; but the Seeds, the more rough and ſharp they are, the more they ſtimulate and tear the Senſe.

AND then the Pleaſure of Taſte we feel no further than the Palate; when the Food is driven down through the Jaws, and divided among the Limbs, the Pleaſure is gone; nor is it of any Concern with what Meat our Bodies are nouriſhed, if you can but digeſt what you eat, and ſeparate it among the Members, and preſerve the moiſt Tenor of the Stomach.

I SHALL now account why, as we find, [c] different Sorts of Food are agreeable to different Palates; or why, what is ſour and bitter to ſome, ſeems to others exceeding ſweet. In theſe Caſes the Variety and Difference are ſo great, that what is Food to one will prove ſharp Poiſon to another; and it happens that a Serpent touched with the Spittle of a Man, expires and bites himſelf to Death.

[c] The Reaſon why the ſame Meat has different Effects upon different Palates, is, becauſe the Organ of the Taſte is different in ſome Men, and in ſome Animals, from what it is in others; either in its Texture or Configuration of the Atoms, or of the Spaces that intervene between them; even as the other Parts of Men or Animals are different, eſpecially the outward. But the different Paſſages or Pores muſt neceſſarily admit and receive different Corpuſcles of Juice; and every thing out of which Juice is ſqueezed, contains Seeds of different Figures; and the Corpuſcles of all Juices, by reaſon of their various Figuration, do not agree with and fit the Organs of all Animals.

BESIDES,

Præterea, nobis Veratrum eſt acre venenum,
At Capris adipes, & Coturnicibus auget.
Ut, quibus id fiat rebus, cognoſcere poſſis,
Principiò meminiſſe decet, quæ diximus ante,
Semina multimodis in rebus miſta teneri.
Porro omnes, quæcunque cibum capiunt Animantes,
Ut ſunt diſſimiles extrinſecùs, & generatim
Extima membrorum circumcæſura coërcet,
Proinde ac Seminibus diſtant variantque figura.
Semina cùm porro diſtent, differre neceſſe 'ſt
Intervalla, Viaſque, Foramina quæ perhibemus,
Omnibus in membris, & in ore, ipſoque palato.
Eſſe minora igitur quædam, majoraque debent,
Eſſe triquetra allis, aliis quadrata neceſſe 'ſt:
Multa rotunda, modis multis multangula quædam.
Namque Figurarum ut ratio, motuſque repoſcunt,
Proinde Foraminibus debent differre figuræ:
Et variare viæ proinde ac textura coërcet.
Ergo ubi quod ſuave 'ſt aliis, aliis ſit amarum:
Illis, queis ſuave 'ſt, lævißima corpora debent
Contrectabiliter caulas intrare palati.
At contrà, quibus eſt eadem res intùs acerba:
Aſpera nimirum penetrant, hamataque fauceis.
Nunc facile ex his eſt rebus cognoſcere quæque.
Quippe, ubi quoi Febris, bili ſuperante, coorta 'ſt,
Aut alia ratione aliqua 'ſt vis excita morbi;
Perturbatur ibi totum jam Corpus, & omnes
Commutantur ibi poſituræ Principiorum:
Fit, priùs ad ſenſum ut quæ corpora conveniebant,
Nunc non conveniant, & cætera ſint magis apta,
Quæ penetrata queunt ſenſum progignere acerbum.
Utraque enim ſunt in mellis commiſta ſapore,
Id quod jam ſuperà tibi ſæpe oſtendimus antè.

Nunc

Besides, to Us Hellebore is ſtrong Poiſon, but Goats it fattens, and is Nouriſhment to Quails; and to underſtand by what means this comes to paſs, you muſt recollect what we obſerved before, that Seeds of different kinds are mingled in the Compoſition of all Bodies.

And then, all Animals ſupported by Food, as they differ in outward Shape, and after their ſeveral kinds have a different Form of Body and Limbs, ſo they conſiſt of Seeds of different Figures; and ſince their Seeds differ, the Pores and Paſſages which (as we ſaid) were in all the Parts, and in the Mouth and Palate itſelf, muſt differ likewiſe; ſome muſt be leſs, ſome greater; ſome with three, ſome with four Squares; many round, and ſome with many Corners in various Manners: For as the Frame of the Seeds and their Motions require, the Pores muſt differ in their Figure. The Difference of the Pores depends upon the Texture of the Seeds, and therefore what is ſweet to one is bitter to another: It is ſweet, becauſe the ſmoothest Seeds gently enter into the Pores of the Palate; but the ſame Food is bitter to another, becauſe the ſharp and hooked Particles pierce the Jaws and wound the Senſe.

Now, by obſerving this, Things will appear plain; for when a Man has a Fever, either by the overflowing of the Gall, or whether the Violence of the Diſeaſe be raiſed by any other Means, in ſuch a Caſe all the Body is diſturbed, and all the Order and Diſpoſition of the Seeds are changed. And hence it is, that the Juices that were before agreeable to the Senſe, are no longer pleaſing, and thoſe are more fit to enter the Pores that fret and produce a bitter Taſte; for even in Honey there is a Mixture of rough and ſmooth Seeds, as we had frequent Occaſion to mention to you before.

And

Nunc age, quo pacto Nareis adjectus odoris
Tangat, agam. Primùm res multas esse necesse 'st,
Unde fluens volvat varius se fluctus Odorum.
Nam fluere, & mitti volgò, spargique putandum 'st.
Verùm aliis alius magis est Animantibus aptus,
Dissimileis propter formas, ideoquè per auras
Mellis Apes quamvis longè ducuntur odore:
Volturiique cadaveribus: tum fissa ferarùm
Ungula quò tulerit gressum, promissa Canum vis
Ducit: & humanum longè præsentit odorem
Romulidarum arcis servator, candidus Anser.
Sic aliis alius nidor datus ad sua quemque
Pabula ducit, & à tetro resilire veneno
Cogit; eoque modo servantur sæcla ferarum.
Hic Odor ipse igitur, nareis quicunque lacessit,
Est alio ut possit permitti longiùs alter.
Sed tamen haud quisquam tam longè fertur eorum,
Quàm Sonitus, quàm Vox, mitto jam dicere, quàm res,
Quæ feriunt Oculorum acies, visumque lacessunt.
Errabundus enim tardè venit, ac perit antè
Paullatim facilis distractus in Aëris auras:

AND now ſhall I paſs on, and ſhew in what manner the Approach of Smells affect the Noſe. And firſt, A various Stream of Odours is continually flowing from all Bodies; for you muſt ſuppoſe that Smells are perpetually thrown off, are emitted and diſperſed abroad; but ſome are more peculiar to ſome Animals than others, becauſe they conſiſt of Seeds of different Figures; and therefore the Bee is attracted by the Smell of Honey in the Air afar off, and Vultures by the Stink of Carcaſes; and ſo the natural Quality of the Hound drives him on where the Hoof of the Stag has led the Way, and the white Gooſe (the Saviour of the Capitol) can perceive the Smell of a Man at a great Diſtance.

SO it is the Difference of Smell, peculiar to different Creatures, that directs every Species to its proper Food, and makes it ſtart at the Approach of Poiſon; and by that means the Race of Beaſts is conſtantly preſerved.

[d] BUT this Smell or Odour that affects the Noſe, ſome kinds of it are emitted much further than others, but no one of them is carried ſo far as Sound or Voice (not to ſpeak of thoſe Images that ſtrike the Eye and provoke the Sight) for they wander about and move lazily, and being ſcattered through the Air, die away by Degrees before they have gone far, and for this Reaſon, be-

[d] Odours move more ſlowly through the Air than Sound, are more eaſily diſſipated, and are not diffuſed ſo far, becauſe they flow from the moſt inward Parts of an odorous Body, and the Principles of which they are compoſed are larger than the Principles of Sound, and therefore cannot pierce through the Paſſages that Sound can; and therefore Odour muſt neceſſarily move more ſlow, and be more eaſily diſſipated by the Air it meets in its Paſſage. And this too is the Reaſon why, though we can eaſily judge from what Part a Sound comes to us, we cannot ſo eaſily diſtinguiſh on what Side of us the Body is that diffuſes an Odour.

cauſe

Ex alto primùm quia vix emittitur ex re.
Nam penitùs fluere, atque recedere rebus odores
Significat, quòd fracta magis redolere videntur
Omnia, quòd contrita, quòd igni conlabefacta.
Deinde videre licet majoribus esse creatum
Principiis Voci: Quoniam per saxea septa
Non penetrat, quà Vox volgò, Sonitusque feruntur.
Quare etiam quod olet, non tam facilè esse videbis
Investigare, in qua sit regione locatum.
Refrigescit enim cunctando plaga per auras:
Nec calida ad sensum decurrit nuntia rerum.
Errant sæpe Canes itaque, & vestigia quærunt.
Nec tamen hoc solis in Odoribus, atque Saporum
In genere est: Sed item Species rerum, atque Colores
Non ita conveniunt ad sensus omnibus omnes,
Ut non sint aliis quædam magis acria visu.
Quinetiam Gallum, noctem explaudentibus alis
Auroram clara consuetum voce vocare,
Nenu queunt rapidi contra constare Leones,
Inque tueri: Ita continuò meminere fugaï:
Nimirum, quia sunt Gallorum in corpore quædam
Semina, quæ, cùm sunt oculis immissa Leonum,
Pupillas interfodiunt, acremque dolorem
Præbent, ut nequeant contrà durare feroces;
Cùm tamen hæc nostras acies nil lædere possint:
Aut quia non penetrant, aut quòd penetrantibus illis
Exitus ex Oculis liber datur, in remeando
Lædere ne possint ex ulla lumina parte.

Nunc

cauſe they flow with Difficulty from the moſt inward Parts of Bodies; and that Odours are emitted from the loweſt Profundity of the Subject, is proved from this, that the more they are broken and bruiſed or ſcattered by Fire, the ſtronger they ſmell.

And then we may obſerve, that Smells are formed of larger Seeds than thoſe of Voice; for they cannot pierce through Walls of Stone, where Voice and Sound freely paſs; and therefore we cannot ſo eaſily diſtinguiſh on which Side of us the Body is placed that diffuſes the Smell; for the Stroke grows cold as it moves ſlowly through the Air, nor does the hot Scent briſkly touch the Organ; and therefore Hounds are often at a Fault, and hunt about for the Trail.

And this happens not only in Caſes of Smell and Taſte; but the Images of Things, and all Colours, do not affect the Eyes of all Men alike, but to ſome they are more ſharp and painful to the Senſe than they are to others.

For the [e] Cock, that claps his Wings and drives away the Darkneſs, and by his clear Notes calls forth the Morning Light, the fierceſt Lion dares not ſtand againſt this Creature, nor look him in the Face, but inſtantly prepares for Flight; and for this Reaſon, becauſe there are certain Seeds in the Body of the Cock, that when emitted into the Eyes of the Lion, fret and tear the Balls, and cauſe a very acute Pain, which the Beaſt with all his Courage is not able to bear; and yet theſe Particles are no way hurtful to our Eyes; either they do not pierce them, or if they do, they find a free Paſſage and return eaſily from the Eyes again, ſo that they do not the leaſt Prejudice to the Sight.

[e] The Lion is terrified at the Sight of a Cock; he does not ſay it is the crowing of the Cock that frightens that wild Animal.

And

Nunc age, quæ moveant Animum res, accipe, & unde,
Quæ veniunt, veniant in Mentem, percipe paucis.
Principiò hoc dico, rerum Simulacra vagari
Multa modis multis in cunctas undique parteis
Tenuia, quæ facile inter se junguntur in auris,
Obvia cùm veniunt, ut aranea, bracteaque auri.
Quippe etenim multò magis hæc sunt tenuia textu,
Quàm quæ percipiunt Oculos, visumque lacessunt:
Corporis hæc quoniam penetrant per rara, cientque
Tenuem Animi naturam intùs, sensumque lacessunt.
Centauros itaque & Scyllarum membra videmus,
Cerbereasque canum facies, simulacraque eorum,
Quorum morte obita tellus amplectitur ossa:
Omne genus quoniam passim simulacra feruntur,
Partim sponte sua quæ fiunt Aëre in ipso:
Partim quæ variis ab rebus cumque recedunt:
Et quæ consistunt ex horum facta figuris.
Nam certè ex vivo Centauri non fit imago:
Nulla fuit quoniam talis natura animalis.
Verum ubi equi atque hominis casu convênit imago,
Hæresçit facilè extemplo, quod diximus antè,
Propter subtilem naturam, & tenuia texta.
Cætera de genere hoc eâdem ratione creantur.
Quæ cum mobiliter summa levitate feruntur,
Ut priùs ostendi, facilè uno commovet ictu
Quælibet una animum nobis subtilis imago.

Tenuis

AND now attend, [f] and observe in short, what Things affect the Mind, and from whence proceed those Objects that make an Impression upon it. First then, I say that subtle Images of Things, a numerous Train of them, wander about every Way, and in various Manners. These, as they meet, easily twine and are joined together in the Air, as Threads of Gold or the Web of a Spider; for these are much finer in their Contexture than those Images that strike the Eye and move the Sight. These pierce through the Pores of the Body, and move the subtle Nature of the Mind within, and affect the Sense. Hence it is that we see Centaurs, and the Limbs of Scylla's, and the Heads of Cerberus, and the Shadows of those who have been long since dead, and whose Bones are rotting in the Grave; because Images of all kinds are ever wandering about; some of their own accord are formed in the Air, some are continually flying off from various Bodies, and others rise from these Images mixed together: For it is certain, that the Image of a Centaur never flowed from one that was alive; for there never was such an Animal in Nature; but when the Image of a Horse met by chance with the Image of a Man, it immediately stuck to it, which it easily does, by reason of the Subtilty of its Nature and the Fineness of its Texture; and all other monstrous Figures are formed after the same manner. These Images being exceeding light, and easily put in Motion (as I observed before) each of them affects the Mind at one Stroke;

The Cause of Imagination.

Why we think on Monsters.

[f] He now explains what Imagination is, and the Cause of it. He says, that many most subtle Images, some flowing from Bodies, others formed in the Air of their own accord, and others differently mixed of different Things, are wandering up and down on all Sides in the Air; that these Images penetrate into the Mind, and gently moving it, are the Cause of Imagination.

Tenuis enim mens est, & mirè mobilis ipsa.
Hæc fieri (ut memoro) facilè hinc cognoscere possis,
Quatinus hoc simile est oculis, quod mente videmus,
Atque oculis simili fieri ratione necesse'st:
Nunc igitur quoniam docui me fortè Leones
Cernere per simulacra, oculos quæcunque lacessunt:
Scire licet mentem simili ratione moveri
Per simulacra Leonum cætera, quæ videt æquè,
Nec minùs, atque oculi: nisi quòd mage tenuia cernit.
Nec ratione alia, cùm somnus membra profudit,
Mens animi vigilat, nisi quòd simulacra lacessunt,
Hæc eadem nostros animos, quæ, quom vigilamus:
Usque adeo, certè ut videamur cernere eum, quem
Reddita vitaï jam mors, & terra potita'st.
Hoc ideo fieri cogit Natura, quòd omnes
Corporis offecti sensus per membra quiescunt,
Nec possunt falsum veris convincere rebus.
Præterea, Meminisse jacet, languetque sopore,
Nec dissentit, eum mortis, lethique potitum
Jampridem, quem Mens vivum se cernere credit.

Quod

for the Mind is of a very ſubtle Nature, and wonderfully diſpoſed to move.

THAT the Mind is moved, as I obſerved, by the Images of Things, you may eaſily collect from hence, that what we perceive by the Mind is exactly like what we ſee with our Eyes; and therefore they muſt of neceſſity be both affected by the ſame Things, and in the ſame manner. And ſo, when I ſaid, for Inſtance, that I ſee a Lion by means of the Image that ſtrikes upon the Eyes, I know by the ſame Rule that the Mind is moved by another Image of a Lion, which it equally and no leſs ſees, than the Eye ſees the Image proper to it; with this Difference only, that the Mind can perceive Images of a more thin and ſubtle Nature.

Why theſe Fancies ſeem real.

[g] NOR from any other Reaſon is the Mind awake when the Body is aſleep, but becauſe thoſe very Images affect the Mind which were uſed to move the Senſe when we were awake, ſo that we fully believe we ſee a Perſon who has been long ſince dead and buried in the Grave; and it cannot well be otherwiſe, becauſe all the Senſes of the Body are obſtructed and bound up by Sleep, and therefore have no Power to convince us of the contrary. Beſides, the Memory is feeble and languiſhes by Reſt, and makes no Objection to ſatisfy us, that the Man has been long in the Arms of Death, whom the Mind really believes it ſees alive.

[g] The Images that are continually wandering to and fro in all Places, ſtrike with ſuch Violence upon the Sleeper, that they ruſh into his Mind, and ſhake and diſturb it to ſuch a Degree, as begets in it an Imagination of the very Things whoſe Images they are. And the Reaſon why we believe the Dead are actually preſent with us, is, becauſe the Senſes, by which alone we diſtinguiſh between true and falſe, being lulled and ſtupified by Sleep, cannot perform their Functions. Beſides, the Memory is ſtupified, and we do not at that time recollect that the Perſon who ſeems to be preſent with us is dead.

Quod supereſt, non eſt mirum, Simulacra moveri,
Brachiaque in numerum jactare, & cætera membra.
Nam fit, ut in ſomnis facere hoc videatur Imago.
Quippe, ubi prima perit, alioque eſt altera nata
Endo ſtatu, prior hæc geſtum mutâſſe videtur.
Scilicet id fieri celeri ratione putandum 'ſt.
Multaque in his rebus quæruntur, multaque nobis
Clarendum 'ſt, planè ſi res exponere avemus.
Quæritur in primis, quare, quod quoique libido
Venerit, extemplo Mens cogitet ejus idipſum.
Anne voluntatem noſtram Simulacra tuentur?
Et ſimulac volumus, nobis occurrit Imago?
Si Mare, ſi Terram cordi 'ſt, ſi denique Cælum,
Conventus hominum, Pompam, Convivia, Pugnas,
Omnia ſub verbone creat Natura, paratque?
Quom præſertim aliis eadem in regione, locoque
Longè diſſimileis Animus res cogitet omnis?
Quid porro, in numerum procedere quom Simulacra
Cernimus in ſomnis, & mollia membra movere,
Mollia mobiliter quom alternis brachia mittunt?
Et repetunt oculis geſtum pede convenienti?
Scilicet arte madent Simulacra & docta vagantur,
Nocturno facere ut poſſint in tempore ludos?

An

AND then it is no wonder that the Images ſeem to move, and to throw about their Arms and the reſt of their Limbs to exact Time, and thus they ſeem to do when we are in a Dream [h]; for when the firſt Image is gone, and another ſprings up in a different Poſture, the firſt, we think, has changed its Shape; and all this, you muſt conceive, is done in an Inſtant of Time. There are many other Inquiries about Things of this Nature, and we muſt enter into long Diſputes if we attempt to give a diſtinct Anſwer to every one.

Why we think on what we will.

FIRST then, it is aſked, How it is that whatever we deſire to think of, the Mind immediately thinks upon that very Thing? Is it that the Images are always ready at the Command of the Will? Does the Image immediately occur to us the Moment we deſire? If we fancy to think of the Sea, the Earth, the Heavens, of Senates, Shews, Feaſts, Battles; does Nature form theſe, and provide them ready at our Nod? eſpecially ſince the Minds of others, that are in the ſame Country and in the ſame Place with us, think of Things quite different from theſe?

AND then, ſince we ſee Images in our Sleep to ſtep to Time, to move their pliant Limbs, and throw about their tender Arms alternately, and keep due Meaſure with their Feet; are they taught this by Art? Have they learnt to dance, that thus they play their wanton Sports by Night? [i] Is not this

[h] Since we continue ſome time in the ſame Imagination, it is not one Image that is before the Mind all that while, but many Images, that offer themſelves, ſucceſſively, Image after Image in a never-ceaſing Flow. If theſe Images remain in the ſame Poſture, the Thing we fancy we ſee will ſeem without Motion; but if the Poſture of the Images vary, it muſt of neceſſity ſeem to move.

[i] What we take to be one ſingle Moment of Time, is indeed many Moments; ſo that the Images being, as they are, extremely ſubject to Motion, a Multitude of them preſent

An magis illud erit verum, quia tempore in uno
Cùm ſentimus id: ut cùm vox emittitur una:
Tempore multa latent, ratio quæ comperit eſſe:
Propterea fit, uti quovis in tempore quæque
Præſto ſint Simulacra locis in queiſque parata?
Tanta eſt mobilitas, & eorum copia tanta.

Et quia tenuia ſunt, niſi ſe contendit, acutè
Cernere non potis eſt Animus; proinde omnia, quæ ſunt
Præterea, pereunt, niſi ſic ſeſe ipſe paravit.
Ipſe parat ſeſe porro, ſperatque futurum,
Ut videat, quod conſequitur rem quamque: fit ergo.

Nonne vides, Oculos etiam, quom, tenuia quæ ſint,
Cernere cœperunt, contendere ſe, atque parare,
Nec ſine eo fieri poſſe, ut cernamus acutè?
Et tamen in rebus quoque apertis noſcere poſſis,
Si non advertas Animum, proinde eſſe, quaſi omni
Tempore ſemotæ fuerint, longèque remotæ.
Cur igitur mirum eſt, Animus ſi cætera perdit,
Præter quàm quibus eſt in rebus deditus ipſe?

Deinde adopinamur de ſignis maxima parvis:
Ac nos in fraudem induimus, fruſtramur & ipſi

Fit quoque ut interdum non ſuppeditetur Imago
Ejuſdem generis, ſed Fœmina quæ fuit antè,
In manibus Vir tum factus videatur adeſſe:

Aut

this the Truth rather, that what we take for one Moment of Time, this preſent *Now*, has many Parts included, as we find by Reaſon? And therefore it is, that in every Inſtant there are a thouſand different Images always ready in every Place; ſo numerous are they, and ſo apt to move; and then they are ſo exceeding ſubtle, that the Mind cannot poſſibly perceive them diſtinctly, without the niceſt Diligence. And ſo thoſe Images die away unobſerved, which the Mind does not apply itſelf to perceive; but it does apply itſelf cloſely to diſtinguiſh the Image it hopes to find, and therefore ſees it.

DON'T you obſerve that the Eyes, when they would diſcover an Object exceeding ſmall, contract themſelves cloſe and provide for it; nor can they accurately diſtinguiſh, except they do ſo? And you will find, even in Things ever ſo plain, unleſs you ſtrictly apply your Mind, they will be as if they were utterly obſcure, and at the greateſt Diſtance undiſcovered. Where is the Wonder then, that the Mind ſhould loſe the Obſervation of all other Images but thoſe it particularly inquires after and is employed about?

BESIDES, we often miſtake ſmall Objects for great, and ſo we contribute to our own Deluſion and impoſe upon ourſelves.

IT happens likewiſe, that ſometimes an Image, of a different kind, preſents itſelf to the Mind. Thus the Form that was before a Woman, now ſhews itſelf a Man, or ſome other Perſon of a

themſelves to us every Moment, and among them the Image of the Thing of which we pleaſe to think. Beſides, though all kinds of Images are continually at Hand, yet they being moſt tenuious and ſubtle, the Mind cannot perceive them, unleſs ſhe watch with great Diligence and endeavour to do ſo; for ſubtle Things will eſcape unheeded by a negligent Mind, as they do from a careleſs and unwatchful Eye.

Aut alia ex alia facies, ætaſque ſequatur :
Quod ne miremur, Sopor, atque Oblivia curant.
Illud in his rebus vitium vehementer, & iſtum
Effugere errorem, vitareque præmeditator,
Lumina non facias Oculorum clara creata,
Proſpicere ut poſſimus : &, ut proferre viai
Proceros paſſus, ideo faſtigia poſſe
Surarum, ac Feminum pedibus fundata plicari :
Brachia tum porro validis ex apta lacertis
Eſſe, Manuſque datas utraque à parte miniſtras,
Ut facere ad vitam poſſimus, quæ foret uſus.
Cætera de genere hoc inter quæcunque pretantur :
Omnia perverſa præpoſtera ſunt ratione.
Nil adeo quoniam natum 'ſt in Corpore, ut uti
Poſſemus, ſed quod natum 'ſt, id procreat uſum ;
Nec fuit ante Videre Oculorum lumina nata :
Nec dictis Orare priùs, quàm Lingua creata 'ſt :
Sed potiùs longè Linguæ præceſſit origo
Sermonem, multòque creatæ ſunt priùs Aures,
Quàm Sonus eſt auditus : & omni denique membra
Antè fuere (ut opinor) eorum quàm foret uſus.
Haud igitur potuere utendi creſcere cauſa.

At

different Age and Complexion; but this we are not to wonder at, since the Senses are all asleep, and we are wholly in a State of Forgetfulness.

The Limbs not made for proper Uses.

BUT in Subjects of this nature, guard yourself to the utmost of your Power against that [k] Error, that gross Mistake; and never believe that those bright Orbs, the Eyes, were made that we might see; or that our Legs were made upright, and Thighs fixed upon them, and were supported by Feet, that we might walk and take large Strides; that our Arms were braced with strong Sinews, and that our Hands hung on both Sides, to assist us in those Offices that are necessary to the Support of Life. And whatever Constructions they put upon other Parts of the Body, they are all absurd and against Reason; for no Member of the Body was made for any particular Use, but after it was made each Member found out a Use proper to itself; for there was no such Thing as to see before the Eyes were made, nor to speak before the Tongue was formed; but the Tongue was rather in Being long before there was Speech, and the Ears were made long before any Sound was heard. In short, all the Members, in my Opinion, were in Being before their particular Uses were set out. This is so true that, to engage in

[k] It was the Opinion of *Epicurus*, that the Members of our Body were not made designedly for proper Uses, but being made by Chance, the Use that first offered itself was laid hold of by each Member; for if any thing was made for a certain future Use, something must have præ-existed, that signified that such a Use would be convenient or necessary. For Example: If there had not been a previous Use of Fighting, Sleeping and quenching of Thirst, Armour, Beds and Cups had never been thought of; thus the Eye could not be made for the sake of Seeing, *&c.* This Opinion is ridiculous and extravagant; but the Philosopher was forced to resort to it, otherwise he must have allowed of a Providence, which is not more visible in any thing than in the wonderful Mechanism of the Parts of a human Body.

Battle,

At contrà conferre manu certamina pugnæ,
Et lacerare artus, fœdareque membra cruore,
Antè fuit multò, quàm lucida tela volarent.
Et volnus vitare priùs natura coëgit,
Quàm daret objectum parmaï læva per artem.
Scilicet & fessum corpus mandare quieti,
Multò antiquius est, quàm lecti mollia strata.
Et sedare sitim priùs est, quàm pocula, natum.
Hæc igitur possent utendi cognita causa
Credier, ex usu quæ sunt vitaque reperta.
Illa quidem seorsum sunt omnia, quæ priùs ipsa
Nata, dedere suæ post notitiam utilitatis.
Quo genere in primis Sensus, & Membra videmus.
Quare etiam atque etiam procul est ut credere possis,
Utilitatis ob officium potuisse creari.
Illud item non est mirandum, Corporis ipsa
Quod natura Cibum quærit quoiusque animantis.
Quippe etenim fluere, atque recedere corpora rebus
Multa modis multis docui, sed plurima debent
Ex animalibus iis, quæ sunt exercita motu;
Multaque per sudorem ex alto pressa feruntur,
Multa per os exhalantur, quom languida anhelant:
His igitur rebus rarescit Corpus; & omnis
Subruitur natura, dolor quam consequitur rem:
Propterea capitur Cibus, ut suffulciat artus,
Et recreet vireis interdatus, atque patentem
Per membra ac venas ut amorem obturet edendi.
Humor item discedit in omnia quæ loca cunque.
Poscunt Humorem, glomerataque multa vaporis
Corpora quæ stomacho præbent incendia nostro,
Dissupat adveniens liquor, ac restinguit, ut ignem:

Urere

Battle, to mangle the Limbs, and to ſtain the Body over with Blood, theſe were in Being before any ſhining Darts flew through the Air, and Nature taught us to avoid a Wound before the Left Hand learnt to oppoſe a Shield in our Defence; and ſo, to commit the Body to Reſt was long before the Invention of ſoft Beds, and to quench the Thirſt was practiſed before the Uſe of Cups. All theſe Things, we may believe, were invented for common Benefit, as they were found proper and convenient for the Occaſions of Life. All Things therefore, that were in Being before the Uſe of them was determined, applied themſelves afterwards to the Office that was moſt ſuitable and ſerviceable to them. Of this kind principally, are the Senſes and Members of our Bodies; and therefore you are to avoid, upon all Accounts, ſo much as to think that they were at firſt formed for any particular Deſign or Uſe.

Thirſt and Hunger.

Nor is it wonderful at all, that it is the Nature of every Animal to require Meat; for I have told you that a Train of Effluvia's are ever flowing from all Bodies, in various Manners, but moſt are diſcharged from thoſe Animals that are moſt uſed to Motion; many Particles forced from within are carried off by Sweat, and many exhale through the Mouth, when we are fatigued and pant for Breath. The Body therefore, by theſe Diſcharges, becomes rarefied, and all Nature is falling to Pieces, which is attended with great Pain. Food therefore is taken to prop up the Limbs, and being given from time to time, it renews the Strength, and ſatisfies that gaping Deſire of eating through the Limbs and Veins.

The cooling Drink likewiſe deſcends into all the Parts that require Moiſture, and the flowing Liquor ſcatters all that Heap of hot Particles that ſet our Stomach in a Flame, and extinguiſhes them as Fire,

Urere ne possit calor amplius aridus artus.
Sic igitur tibi anhela sitis de corpore nostro
Abluitur, sic expletur jejuna cupido.
Nunc quî fiat, uti Passus proferre queamus,
Cùm volumus, varièque datum sit membra movere:
Et quæ res tantum hoc oneris protrudere nostri
Corporis insuerit, dicam: tu percipe dicta.
Dico Animo nostro primùm simulacra meandi
Accidere, atque Animum pulsare, ut diximus antè.
Inde Voluntas fit: neque enim facere incipit ullam
Rem quisquam, quam Mens providit, quid velit, antè.
At, quod providet, illius rei constat Imago.
Ergo Animus cùm sese ita commovet, ut velit ire,
Inq; gredi, ferit extemplo, quæ in Corpore toto
Per membra, atque artus, Animaï dissita vis est:
Et facile'st factu, quoniam conjuncta tenetur.
Inde ea proporro Corpus ferit, atque ita tota
Paullatim moles protruditur, atque movetur.
Prætèrea, tum rarescit quoque Corpas, & Aër,
Scilicet ut debet qui semper mobilis exstat,
Per patefacta venit, penetratque foramina largus;
Et dispergitur ad parteis ita quasque minutas
Corporis: hinc igitur rebus fit utrinque duabus,

Corpus

Fire, ſo that the Heat has no longer Power to ſcorch our Bowels; and thus is panting Thirſt waſhed away from our Bodies, thus our craving Hunger is ſatisfied.

How we move when we pleaſe.

[1] AND now attend, and you ſhall know how it is that we are able to walk when we will, that we have a Power to move our Limbs as we pleaſe, and what it is that thruſts the Body forward with all its Weight.

I SAY then, that the Images of Motion firſt affect and ſtrike the Mind, as we obſerved before. This makes the Will; for we never attempt to do any thing before the Mind knows what it is we deſire to do, and the Image of that Thing which occurs to the Mind muſt be preſent before it. And thus the Mind, having moved itſelf ſo as to reſolve to go forward, ſtrikes immediately upon the Soul, which is diffuſed through the whole Body; and this is eaſily done, becauſe they are both cloſely joined together. The Soul then ſtrikes the Body, and ſo the whole Bulk by degrees is thruſt forward and put into Motion.

BESIDES, the Body by this means is rarefied, and the Air, which is ever diſpoſed to move, enters the open Paſſages, and pierces through the Pores in great Abundance, and ſo is diſperſed through every minute Part of the Body. By theſe Two therefore (by the Soul labouring within, and by

[1] He now explains the Cauſe of voluntary Motion. Certain Seeds, by which the Will to move may be ſtirred up in the Mind, ſtrike the Mind. This cauſes the Mind to will; and that ſhe may execute what ſhe wills, ſhe rouzes up the Soul, annexed to her and diffuſed through the whole Body; and hence the whole Frame is thruſt forward. But leſt the Soul ſhould be unable to move ſo great a Weight, the Air aſſiſts her from without, and entering into the Pores of the Body, as it is rarefied by Motion, helps to drive on the Burden; and thus, by the Soul labouring within, and by the Air entering from without, the Body is ſhoved forward, as a Ship is driven with Sails and Oars.

the

Corpus uti, ut Navis velis, ventoque, feratur.
Nec tamen illud in his rebus mirabile conflat,
Tantula quòd tantum Corpus Corpuscula possint
Contorquere, & onus totum convertere nostrum.
Quippe etenim Ventus subtili corpore tenuis
Trudit agens magnam magno molimine Navim:
Et manus una regit quantovis impete euntem:
Atque Gubernaclum contorquet quolibet unum.
Multaque per trochleas, & tympana pondere magno
Commovet, atque levi sustollit Machina nisu.
Nunc quibus ille modis Somnus per membra quietem
Inriget, atque Animi curas è pectore solvat:
Suavidicis potiùs, quàm multis versibus, edam,
Parvus ut est Cycni melior canor, ille Gruum quàm
Clamor, in ætheriis dispersus nubibus Austri.
Tu mihi da tenueis aureis, animumque sagacem,
Ne fieri negites, que dicam posse; retroque
Vera repulsanti discedas pectore dicta:
Tutemet in culpa quom sis ne cernere possis.
Principiò Somnus fit, ubi est distracta per artus
Vis Animæ, partimque foras ejecta recessit:
Et partim contrusa magis concessit in altum.
Dissolvuntur enim tum demum Membra, fluuntque.
Nam dubium non est, Animaï quin opera sit

Sensus

the Air entering from without) the Body is moved, as a Ship is by Oars and Wind.

Nor is this at all ſtrange, that Particles ſo very ſmall ſhould turn about the Bulk of our Bodies, and move ſo great a Weight; for the driving Wind, formed of ſo fine and ſubtle Seeds, thruſts forward a large Ship with mighty Force, and one Hand can govern it under full Sail, by turning one little Helm, which Way it pleaſes; and an Engine with ſmall Labour is able, by Pullies and Wheels, to move many Bodies of a great Weight.

Next, how ſoft Sleep diſſolves the Limbs in Reſt, and frees the Mind from anxious Care, I chooſe in few but ſweeteſt Numbers to explain; as the Swan's ſhort Song is more melodious than the harſh Noiſe of Cranes ſcatter'd by Winds through all the Air. Hear me, my *Memmius*, with attentive Ears and a diſcerning Mind, leſt what I ſhall prove, you think impoſſible to be; and ſo your Mind refuſing to admit the Truth I ſhall relate, you make no Progreſs in Philoſophy, when the Fault is in yourſelf, that you will not ſee. *Sleep.*

And firſt, [m] Sleep comes on when the Power of the Soul, diffuſed through the Limbs, Part of it is thrown out and fled abroad, and Part being ſqueezed more cloſe retires further within; then are the Limbs diſſolved and grow weak. For without doubt the Buſineſs of the Soul is to ſtir up

[m] He ſays our Senſes are locked up and hindered by Sleep from performing their Functions; but our Senſes proceed from the Operation of the Soul; therefore it follows, that when the Animal is aſleep his Soul muſt partly be gone out of him, partly be retired into the inmoſt Receſſes of his Body, and partly be diſperſed through the Members. He will not allow that when the Animal ſleeps the Soul is intirely retreated from the whole Body, for then neither the Creature nor his Senſes could revive after Sleep; for as Fire buried in Aſhes is not wholly extinguiſhed, ſo neither is the Soul extinct in an Animal aſleep.

Senſe

Sensus hic in nobis, quem cùm Sopor impedit esse,
Tum nobis Animam perturbatam esse putandum'st,
Ejectamque foras, non omnem; namque jaceret
Æterno Corpus perfusum frigore lethi:
Quippe ubi nulla latens Animaï pars remaneret
In membris, cinere ut multa latet obrutus Ignis,
Unde reconflari Sensus per membra repente
Possit ut ex igni cæco consurgere Flamma.
Sed quibus hæc rebus novitas confletur & unde
Perturbari Anima, & Corpus languescere possit,
Expediam: tu fac ne ventis verba profundam.
Principiò, externa Corpus de parte necessum'st,
Aëriis quoniam vicinum tangitur auris,
Tundier, atque ejus crebro pulsarier ictu.
Proptereaque fere res omnes, aut Corio sunt,
Aut Seta, aut Conchis, aut Callo, aut Cortice tectæ.
Interiorem etiam partem spirantibus Aër
Verberat hic idem cùm ducitur, atque reflatur.
Quare utrinque secùs quom Corpus vapulet, & quom
Perveniant plagæ per parva foramina nobis
Corporis ad primas parteis, elementaque prima;
Fit quasi paullatim nobis per membra ruina.
Conturbantur enim posituræ principiorum
Corporis, atque Animi, sic, ut pars inde Animaï
Ejiciatur & introrsum pars abdita cedat;

Pars

Senſe in us, which ſince Sleep removes, we muſt conclude that the Soul then is diſturbed and driven abroad: Not the whole Soul; for then the Body would lie in the cold Arms of eternal Death; then no Part of the Soul would lie retired within the Limbs, as a Fire remains covered under a Heap of Aſhes; from whence the Senſes might be kindled again through the Body, as a Flame is ſoon raiſed from hidden Fire.

But by what means this wonderful Change is brought about, how the Soul is thus diſordered and the Body languiſhes, I ſhall now explain. Do you ſee that I do not ſcatter my Words into the Wind.

And firſt, [n] The outward Surface of Bodies which are always touched by the adjacent Air, muſt of neceſſity be ſtruck by it and beaten with frequent Blows; and for this Reaſon all Things almoſt are covered either with Skin, or Briſtles, or Shells, or Buff, or Bark. This Air then, as it is drawn in and breathed out by Reſpiration, ſtrikes upon the inward Parts of the Body. Since therefore the Body is beat upon from within and without, and ſince the Strokes pierce through the little Pores into the Seeds and firſt Principles of it, this cauſes a kind of Ruin and Deſtruction through all the Limbs; the Situation of the Seeds, both of the Body and Mind, are diſordered; ſo that part of the Soul is forced out, and part retires

[n] The outward Air beats upon the outmoſt Parts of the Body, and the Air that is breathed in ſtrikes the inward Parts; theſe two-fold Strokes diſturb the Order and Site of the Atoms, and cauſe a following Weakneſs in the Soul and Body; part of the Soul is forced out, part retreats inwardly, and part is diſperſed through the Limbs; ſo the Parts thus diſjoined cannot perform their ordinary Functions. The Motions therefore of Senſe being changed, the Senſe too goes away; and thus what was the Support of the Body being abſent, the Body muſt neceſſarily flag and fail.

Pars etiam distracta per artus, non queat esse
Conjuncta inter se, nec motu mutua fungi:
Inter enim sepit aditus Natura, viasque.
Ergo Sensus abit mutatis motibus altè.
Et quoniam non est quasi quod suffulciat artus,
Debile fit Corpus, languescunt omnia membra:
Brachia, Palpebræque cadunt, Poplitesque procumbunt.

Deinde cibum sequitur Somnus, quia quæ facit Aër,
Hæc eadem Cibus, in venas dum diditur omneis,
Efficit: & multò Sopor ille gravissimus exstat,
Quem satur, aut lassus capias, quia plurima tum se
Corpora conturbant magno contusa labore.
Fit ratione eadem conjectus porro Animaï
Altior, atque foras ejectus largior ejus,
Et divisior inter se, ac distractior intus.

Et quoi quisque fere studio devinctus adhæret,
Aut quibus in rebus multùm sumus antè morati,
Atque in qua ratione fuit contenta magis Mens,
In Somnis eadem plerumque videmur obire:
Caufidici causas agere, & componere leges:
Induperatores pugnare, ac prælia obire:
Nautæ contractum cum ventis cernere bellum:

Nos

and lurks close within; and the Part that is diffused through the Limbs is so broken and divided, that the Seeds cannot unite to perform their mutual Operations; for Nature stops up all Passages of Communication between them, and therefore the regular Motions being exceedingly changed, the Sense is intirely gone. Since therefore there is not Power sufficient to support the Limbs, the Body becomes weak; all the Members languish; the Arms, the Eyelids fall; and the Knees sink under the Weight of the Body.

THUS Sleep follows when the Belly is full, because Food, when it is distributed through all the Veins, has the same Effect upon the Soul as the Air had; and that Sleep is by much the soundest which you take when you are weary or full, because then more of the Seeds being agitated and put into Motion by the hard Labour, mutually disturb and disorder one another. And for this Reason the Soul retires further within, and a greater Part of it is thrown out, and the Parts that remain within are the more separated and the further disjoined.

Dreams.

° AND then the Business we more particularly follow, the Affairs we are chiefly employed in, and what our Mind is principally delighted with when we are awake, the same we are commonly conversant about when we are asleep. The Lawyer is pleading of Causes and making of Statutes, the Soldier is fighting and engaging in Battles, the Sailor is warring against the Winds; for my-

° It was the Opinion of *Epicurus*, that the Minds of sleeping Animals are struck and moved by outward and adventitious Images, and that these are the Causes of Dreams. And we usually dream about what we have been chiefly employed in the Day, because the Passages, through which the Images had so often entered, are not closed up, and therefore more easily receive and admit the Images that belong to the Actions in which we have been employed.

Nos agere hoc autem, & Naturam quærere rerum
Semper, & inventam patriis exponere chartis.
Cætera sic studia, atque artes plerumque videntur
In Somnis animos Hominum frustrata tenere.
Et, quicunque dies multos ex ordine ludis
Adsiduas dederunt operas, plerumque videmus,
Quom jam destiterint ea Sensibus usurpare,
Reliquias tamen esse vias in Mente patenteis,
Qua possint eadem rerum Simulacra venire.
Permultos itaque illa dies eadem obversantur
Ante oculos, etiam vigilantes ut videantur
Cernere saltanteis, & mollia membra moventeis:
Et citharæ liquidum carmen, chordasque loquenteis
Auribus accipere, & consessum cernere eundem,
Scenaïque simul varios splendere decores.
Usque adeo magni refert studium, atque voluntas,
Et quibus in rebus consuerint esse operati
Non Homines solùm, sed verò Animalia cuncta.
Quippe videbis Equos forteis, cùm membra jacebunt,
In Somnis sudare tamen, spirareque sæpe,
Et quasi de palma summas contendere vireis,
Tunc quasi Carceribus patefactis sæpe quiete:
Venantumque Canes in molli sæpe quiete
Jactant crura tamen subitò, voceisque repente
Mittunt, & crebras redducunt naribus auras,
Ut vestigia si teneant inventa ferarum.
Expergefactique sequuntur inania sæpe
Cervorum simulacra, fugæ quasi dedita cernant;
Donec discussis redeant erroribus ad se:
At consueta domi Catulorum blanda propago
Degere, sæpe levem ex oculis, volucremque saporem
Discutere, & corpus de terra conripere instant,
Proinde quasi ignotas facies, atque ora tuantur.

Et

ſelf, I am always ſearching into the Nature of Things, and writing my Diſcoveries in *Latin* Verſe; and ſo, many other Arts and Employments are commonly the empty Entertainments of the Minds of Men when they are aſleep.

And they who ſpend their Time in ſeeing of Plays for many Days together, when thoſe Repreſentations are no longer preſent to the waking Senſes, there ſtill remain ſome open Traces left in the Mind, through which the Images of thoſe Things find a Paſſage, ſo that for many Days after the whole Performance is acting over again before their Eyes; and even while they are awake they fancy they ſee the Dancers leaping, and moving their active Limbs; they are raviſhed with the ſoft Notes of the Muſick, and hear the ſpeaking Strings; they ſee the ſame Audience, the ſame Variety of the Scenes and Decorations of the Stage. So ſtrong Impreſſions do Uſe and Cuſtom make upon us; ſuch Effects do the common Buſineſs of Life produce in the Minds of Men, and in Beaſts likewiſe.

The Dreams of Beaſts.

For you ſhall ſee the gallant Courſer, when his Limbs are at reſt, to ſweat in his Sleep, to breathe ſhort, and, the Barriers down, to lay himſelf out as it were on the full Stretch for the Prize.

And Hounds frequently in their ſoft Sleep throw out their Legs, and of a ſudden yelp and ſnuff the Air quick with their Noſe, as if they were full Cry upon the Foot of the Deer; and when awake they ſtill perſue the empty Image of the Game, as if they ſaw it run ſwiftly before them, till undeceived they quit the Chace, and the fancied Image vaniſhes away.

And the fawning Breed of Houſe-Dogs, that live at home, often rouze and ſhake the drowſy Fit from their Eyes, and ſtart up of a ſudden with their Bodies, as if they ſaw a Stranger or a Face they had not been uſed to.

Et quàm quæque magis ſunt aſpera ſemina eorum,
Tam magis in Somnis eadem ſævire neceſſum'ſt.
At variæ fugiunt Volucres, penniſque repente
Sollicitant Divûm nocturno tempore lucos,
Accipitres ſomno in leni ſi prælia, pugnaſque
Edere ſunt perſectantes, viſæque volantes.
Porro Hominum mentes magnis quæ motibus edunt?
Magna etenim ſæpe in Somnis faciuntque, geruntque.
Reges expugnant, capiuntur, prælia miſcent;
Tolluni clamores, quaſi ſi jugulentur ibidem:
Multi depugnant, gemituſque doloribus edunt;
Et quaſi pantheræ morſu ſævique leonis
Mandantur, magnis clamoribus omnia complent.
Multi de magnis per Somnum rebu' loquuntur,
Indicioque ſui facti perſæpe fuere:
Multi mortem obeunt, multi de montibus altis
Se quaſi præcipitent ad terram corpore toto
Exterrentur, & ex Somno, quaſi mentibu' capti,
Vix ad ſe redeunt permoti corporis æſtu.
Flumen item ſitiens, aut fontem propter amœnum
Adſidet, & totum prope faucibus occupat amnem.
Puſi ſæpe lacum propter, ſe, ac dolia curta,
Somno devincti credunt extollere veſtem,
Totius humorem ſaccatum ut corpori' fundant:
Cùm Babylonica magnifico ſplendore rigantur.
Tum, quibus ætatis freta primitus inſinuantur,
Semen ubi ipſa dies membris matura creavit;

Conveniunt

THE ſharper the Seeds are of which the Images are formed, they ſtrike in the Sleep with the greater Violence; ſo, many Birds will fly about, and hide themſelves in the inmoſt Receſſes of ſacred Groves by Night, if in their ſoft Sleep they ſee the Hawk perſuing them upon the Wing, or pouncing or engaging with his Prey. *Frightful Dreams.*

AND then, what mighty Deeds are Men hurrying themſelves about in their Dreams? Then they ſhew their Valour, and do wonderful Exploits; they engage with Kings, are taken Captive, are in the Confuſion of the Battle; they cry out as if they were expiring upon the Spot. Some are in the hotteſt of the Fight, and groan with the Anguiſh of their Wounds, and fill the Air with Complaints, as if they were torn by the Teeth of a Panther or fierce Lion. Some in their Sleep talk of Myſteries of State, and frequently diſcover the Treaſon of their own contriving. [p]Some think they are dying away; and others, falling from dreadful Precipices with all their Weight upon the Earth, are terrified, and awake almoſt out of their Senſes, and can ſcarce recover themſelves from the Hurry and Diſtraction of their Spirits. Another, parched up with Thirſt, ſits on the River's Bank, or by the Side of a pleaſant Fountain, and almoſt drinks down his Throat the whole Stream: And Children in their Sleep often fancy they are near ſome Sink or publick Piſſing place; they think they are taking up their Clothes, that they may make Water freely, and ſo the *Babylonian* Coverlid with its purple Dye, and the rich Bedding, are wet through.

AND further, Thoſe who are in the Heat of Youth, whoſe ripening Age has well digeſted the Semen through all the Limbs, on ſuch the Images *The Cauſe of Love.*

[p] It is no wonder that ſome Dreams fright us more than others, becauſe thoſe whoſe Images are compoſed of rough Seeds, that rudely grate and wound the Mind on which they ſtrike, muſt of neceſſity be the moſt frightful.

Conveniunt Simulacra foris è corpore quoque,
Nuntia præclari voltus, pulchrique coloris:
Qui ciet inritans loca turgida semine multo,
Ut, quasi transactis sæpe omnibu' rebu' profundant
Fluminis ingenteis fluctus, vestemque cruentent.
Sollicitatur id in nobis, quòd diximus antè,
Semen; adulta ætas cùm primùm roborat artus.
Namque alias aliud res commovet, atque lacessit:
Ex homine humanum Semen ciet un' Hominis vis.
Quod simulatque suis ejectum sedibus exit,
Per membra, atque artus decedit corpore toto
In loca conveniens nervorum certa; cietque
Continuò parteis genitaleis corporis ipsas:
Inritata tument loca Semine, fitque voluntas
Ejicere id, quò se contendit dira libido;
Idque petit corpus mens, unde'st saucia amore;
'Namque omnes plerumque cadunt in volnus, & illam
'Emicat in partem sanguis, unde icimur ictu,
'Et si comminus est, hostem ruber occupat humor.
Sic igitur, Veneris qui telis accipit ictum,
Sive Puer membris muliebribus hunc jaculatur,
Seu Mulier toto jac[illegible]rpore amorem,
Unde feritur, eo tendit, gestitque coire,
Et jacere humorem in corpus de corpore ductum:
Namque voluptatem præsagit multa cupido.
Hæc Venus est nobis, hinc autem'st nomen Amoris:
Hinc illæ primum Veneris dulcedinis in cor
Stillavit gutta, & successit fervida cura.
Nam si abest quod ames, præsto Simulacra tamen sunt
Illius, & nomen dulce obversatur ad aureis.

Sed

of every beauteous Object ſtrike deeply, and ſhew the lovely Face and bluſhing Cheek; which ſo provoke and ſtimulate the Parts, ſwelling with Seed in abundance, that they diſcharge, as if the Deed were done, large Floods of Moiſture, and pollute the Robe.

For (as I ſaid before) the Seed begins to boil as ſoon as mature Age has well-braced the Limbs. Other Things are moved and provoked by other Impreſſions, but nothing but the Power of Beauty can put the human Semen into Motion, which, as ſoon as it is ejected from its little Cells, flows through the Limbs and through every Part of the Body, and being received into the Receptacle of the Nerves proper for it, in an inſtant ſtimulates the Genitals. Theſe Parts grow turgid with the Semen, and thence proceeds the Will to project it where the Heat of Luſt ſtrives to reach; for the Mind drives furiouſly towards the lovely Body from whence it received the Wound of Love. Men generally fall upon their Wound, and the Blood guſhes with Violence towards the Part from whence we received the Blow. If the Murderer be near, the red Liquor will ſpout all over him. So he that is ſtruck with the Darts of *Venus* (whether ſome beauteous Boy, with Female Charms, the Arrow caſts; or ſome more beauteous Maid, that ſhoots out Love from every Pore) tends to the Part that gave the Stroke; he is in Raptures to enjoy, to inject and to conſummate; for the hot Deſire to the Act foreſhews the mighty Pleaſure that attends it. This is properly *Venus* to us; this is the Deity of Love. Hence the Drops of ſweet Delight firſt ſtrike upon the Heart, and the burning Fever of ſucceeding Care follows it cloſe; for if the Object of your Love be abſent, her charming Image is always before you, and her ſweet Name is ever thrilling in your Ears.

But

Sed fugitare decet Simulacra, & pabula amoris
Abſterrere ſibi, atque aliò convertere mentem:
Et jacere humorem conlectum in corpora quæque:
Nec retinere ſemel converſum unius amore:
Et ſervare ſibi curam, certumque dolorem.
Ulcus enim viveſcit, & inveteraſcit alendo,
Inque dies gliſcit furor, atque ærumna graveſcit,
Si non prima novis conturbes volnera plagis,
Volgivagaque vagus Venere ante recentia cures,
Aut aliò poſſis Animi traducere motus.

Nec Veneris fructu caret is, qui vitat amorem:
Sed potius, quæ ſunt ſine pœna, commoda ſumit.
Nam certa, & pura eſt ſanis magis inde voluptas,
Quàm miſeris, etenim potiundi tempore in ipſo
Fluctuat incertis erroribus ardor Amantum:
Nec conſtat quid primùm oculis, manibuſque fruantur.
Quod petiere premunt arctè, faciuntque dolorem
Corporis, & denteis inlidunt ſæpe labellis,
Oſculaque adfigunt, quia non eſt pura voluptas:
Et ſtimuli ſubſunt, qui inſtigant lædere idipſum,
Quodcunque eſt, rabies unde illæ germina ſurgunt.
Sed leviter pœnas frangit Venus inter Amorem,
Blandaque refrænat morſus admiſta voluptas.

Namq; in eo ſpes eſt, unde'ſt ardoris origo,
Reſtringui quoque poſſe ab eodem corpore flammam;
Quod fieri contra coram natura repugnat:
Unaque res hæc eſt, quoius quàm pluria habemus,
Tam magis ardeſcit dira cuppedine pectus.
Nam Cibus, atque Humor membris adſumitur intus,
Quæ quoniam certas poſſunt obſidere parteis,

Hoc

BUT take care that you fly those Images, and avoid those Incentives to Love, and divert your Mind some other way; choose to bestow your Favours in common; don't reserve your whole Stock for One only, lest by that means you entail Anxiety and certain Sorrow upon yourself; for the Ulcer spreads and grows stubborn by feeding it, the Madness increases every Day, and the Trouble becomes the heavier, unless you cure old Wounds by new, or, like a Rover, remove your first Smart by wandering over all the Sex, or turn the Passion of your Mind into some other Channel. *A Caution against Love.*

NOR is He without the Pleasures of *Venus*, who disdains the Fetters of Love, but rather takes the Sweet without the Pain that follows it; for such a sober Lover tastes more certain and more unmixed Delight, than those Wretches, those furious Votaries, whose Mind in the very instant of Enjoyment is tossed with a thousand Doubts and Fears. These know not what Sweets they shall first rifle with their Hands and Eyes; what they fasten upon, they strain hard and give Pain to the Body; they often fix their Teeth in the Fair-one's Lips, and pin her down with Kisses: And for this Reason, because the Joy is imperfect, and some Stings remain which provoke them to hurt the Thing, whatever it is, that first put them into a Rage; but *Venus* in the Encounter of Love gently sooths the Pain, and the sweet Pleasure intermixed restrains the Lover's Teeth from biting too hard.

THE Lover hopes, perhaps, that his Flame may be extinguished by the same Object that first blew the Fire, but Experience shews the contrary of This; for This is the only Thing which, the more we enjoy of it, our Soul still burns with the eager Desire of more. Meat and Drink are taken down into the Body, and because they fill up certain empty Places, therefore the Appetite of Eating

Hoc facilè expletur laticum, frugumque cupido;
Ex hominis verò facie, pulchroque colore,
Nil datur in corpus præter Simulacra fruendum
'Tenuia, quæ vento ſpes raptat ſæpe miſella.
Ut bibere in ſomnis Sitiens quom quærit, & humor
Non datur, ardorem in membris qui ſtinguere poſſit:
Sed laticum Simulacra petit, fruſtraque laborat:
In medioque ſitit torrenti flumine potans.
Sic in amore Venus Simulacris ludit Amanteis,
Nec ſatiare queunt ſpectando corpora coram:
Nec manibus quidquam teneris abradere membris
Poſſunt, errantes incerti corpore toto.
Denique quom membris conlatis flore fruuntur
Ætatis, quom jam præſagit gaudia corpus,
Atque in eo eſt Venus, ut muliebria conſerat arva;
Adfigunt avidè corpus, junguntque ſalivas
Oris, & inſpirant preſſantes dentibus ora,
Nequicquam: Quoniam nihil inde abradere poſſunt,
Nec penetrare, & abire in corpus corpore toto.
Nam facere interdum id velle, & certare videntur:
Uſqueadeo cupidè Veneris compagibus hærent,
Membra voluptatis dum vi labefacta liqueſcunt.
Tandem ubi ſe rupit nervis conlecta cupido,
Parva fit ardoris violenti pauſa parumper;
Inde redit rabies eadem, & furor ille reviſit,
Quom ſibi quod cupiant ipſi, contingere quærunt:
Nec reperire malum id poſſunt quæ machina vincat:
Uſque adeo incerti tabeſcunt volnere cæco.
Adde quòd abſumunt vireis, pereuntque labore.

Adde

ing and Drinking is eaſily ſatisfied; but from a lovely Face and a fine Complexion, the Body can enjoy nothing but empty Images, and a fleeting Hope ſcattered by every Wind. As a thirſty Man deſires to drink in his Sleep, and has no Moiſture to allay the Heat within, but vainly catches at the Images of Rivers, and labours to no Purpoſe, and is parched up while he fancies himſelf quaffing in a full Stream; ſo in the Buſineſs of Love, *Venus* deludes the Lover with empty Images, nor can he quench his Deſire by gazing upon the charming Object, nor bring away any thing from the tender Limbs with his Hands, as he wanders with wild Exceſs over all the Body of his Miſtreſs.

Besides, when they ſport in the Flower of their Age with their Limbs mingled in the Embrace, when their Bodies feel the coming Joy, and *Venus* is fully employed to ſow the Female Soil; though they eagerly twine in amorous Folds, and dart their humid Tongues, and bite, and ardently receive each other's Breath, 'tis all to no Purpoſe; for they can carry nothing away from the Parts they ſtrain, nor can Bodies pierce or be in Bodies loſt: For This they ſometimes wiſh, for This they contend when they engage; ſo eagerly are they entangled in the Nets of Love, that their very Limbs are diſſolved in the Exceſs of Pleaſure. Then, when the collected Luſt has burſt from the Nerves, a Ceſſation of the violent Ardour enſues for a while; but the ſame Rage ſoon returns, the ſame Fury is renewed, and again they ſtrive to touch the Point, the End of their Deſires: They can find no Device to ſubdue the Pain they feel, and ſo they pine and languiſh by a ſecret Wound.

And then, [q] they waſte their Strength, and periſh

[q] Here the Poet enumerates the many Inconveniencies that attend upon the Paſſion of Love, which at beſt is a wretched Slavery,

Adde quòd alterius sub nutu degitur ætas.
Labitur interea Res, & Vadimonia fiunt,
Languent officia, atque ægrotat fama vacillans;
Unguenta, & pulchra in pedibus Sicyonia rident:
Scilicet & grandes viridi cum luce smaragdi
Auro includuntur, teriturque thalassina vestis
Assiduè, & Veneris sudorem exercita potat:
Et benè parta patrum fiunt Anademata, Mitræ:
Interdum in pallam, ac Melitensia, Ceaque vertunt.
Eximia veste & victu Convivia, Ludi,
Pocula crebra, Unguenta, Coronæ, Serta parantur;
Nequicquam: Quoniam medio de fonte leporum
Surgit amari aliquid, quod in ipsis floribus angat:
Aut quòd conscius ipse Animus se fortè remordet,
Desidiosè agere ætatem, lustrisque perire:
Aut quòd in ambiguo Verbum jaculata reliquit:
Quòd cupido adfixum cordi vivescit, ut Ignis:
Aut nimium jactarè oculos, aliumve tueri
Quod putat, in voltuque videt vestigia risus.
Atque in Amore mala hæc proprio, summèque secundo
Inveniuntur, in adverso verò, atque inopi sunt,
Prendere quæ possis oculorum lumine aperto,
Innumerabilia: ut meliùs vigilare sit ante,
Qua docui ratione, cavereque, ne inlaqueeris.
Nam vitare, plagas in amoris ne laciamur,

Non

periſh by the Labour they go through. And more, they lie under the Power of another's Will; while their Fortune decays and their Debts increaſe, their Duty is neglected and their tottering Reputation ſickens. Rich Pearls, and fine Shoes of *Sicyon*, ſhine upon the Feet of their Miſtreſs; the large Emeralds, with their green Luſtre, are ſet in Gold; and the blue Veſt is daily ſtained, and continually in uſe drinks up the Sweat of Luſt. The Family Eſtate, acquired with Honour, is changed into Coronets of Ribbands, and Head-dreſſes ſparkling with Jewels; and is ſometimes turned into coſtly Gowns, or Garments of *Melita*, or *Cean* Robes. Beſides, they add to theſe the Luxury of Feaſts and ſtately Couches, Plays, frequent Carouſals, Crowns and Garlands. But in vain! for ſome Bitter bubbles up from the very Fountain of his Delight, and poiſons all his Sweets; either his own guilty Mind ſtings him for leading ſuch a Life of Sloth, and murdering ſo large a Part of his Time; or his Miſtreſs has dropped ſome doubtful Word, which kindles in his fond Heart like Fire; or he thinks ſhe has thrown her Eyes too freely abroad, and glanced upon another, and he diſcovers the Remains of a ſmiling Pleaſure upon her Face.

THESE are the Misfortunes that attend an Amour ever ſo fortunate and conſtant; but the Miſeries of a wretched and diſaſtrous Love are innumerable, and obvious to every one with his Eyes open. You had better therefore be upon your Guard beforehand, and obſerve the Rules I have laid down to prevent your being caught; for 'tis not ſo difficult to avoid being drawn into the Snares

Slavery, obnoxious to Suſpicions and fantaſtical Surmiſes. It waſtes the Strength; for, if we believe ſome Phyſicians, one Drachm of Semen weakens a Man as much as the Loſs of ſixty Ounces of Blood.

of

Non ita difficile eſt quàm captum retibus ipſis
Exire: & validos Veneris perrumpere nodos.
Et tamen implicitus quoque poſſis, inque peditus
Effugere infeſtum, niſi Tute tibi obvius obſtes:
Et prætermittas Animi vitia omnia primùm;
Tum quæ Corpori' ſunt ejus, quam percupis, ac vis.
Nam hoc faciunt Homines plerumque cupidine cæci:
Et tribuunt ea, quæ non ſunt his commoda verè.
Multimodis igitur pravas, turpeiſque videmus
Eſſe in deliciis, ſummoque in honore vigere.
'Atque alios alii inrident, Veneremque ſïadent
'Ut placent, quoniam fœdo adflictantur amore:
'Nec ſua reſpiciunt miſeri mala maxima ſæpe.
Nigra, μελίχρως eſt: Immunda & Fœtida, ἄκοσμος·
Cæſia παλλάδιον· Nervoſa, & Lignea, δορκάς·
Parvola, Pumilio, χαρίτων ἴα, tota merum ſal:
Magna, atque Immanis, κατάπληξις, plenaque honoris:
Balba, loqui non quit, τραυλίζει· Muta, pudens eſt.
At Flagrans, Odioſa, Loquacula, λαμπάδιον fit.
Ἰσχνὸν ἐρωμένιον tum fit, quom vivere non quit
Præ macie: ξαδινὴ verò eſt, jam Mortua tuſſi.
At Gemina & Mammoſa, Ceres eſt ipſa ab Iaccho.
Simula, σιληνὴ, ac Satyra'ſt, Labioſa, φίλημα·
Cætera de genere hoc longum'ſt ſi dicere coner.

Sed

of Love, as to disengage yourself from the Net when you are taken, and to break through the strong Knots which *Venus* ties close upon all her Votaries.

AND though you are entangled and within the Net, you may still avoid much of the Evil, unless you wilfully set yourself against the Remedy. First then, You are to take no notice of any Imperfections, either of Mind or Body, you find in the Mistress you admire and fondly love. All Lovers, blinded by their Passion, observe this, and attribute Beauties to the Fair, to which they have no real Pretence; and therefore the Ugly and Deformed we see have their several Charms, and secure a sovereign Power over their Admirers. The Lover that has such a forbidding Dowdy for a Mistress, is laughed at by his Companions, who advise him to appease *Venus* and render her propitious; while they think nothing of their own greater Misfortunes, in placing their Esteem upon others less lovely and less beautiful. The Black seems brown; the Nasty and the Rank is negligent; the Owl-eyed is a *Pallas*; the Sinewy, with her dry Skin, is a little Doe; the Dwarf, of the Pygmy Breed, is one of the Graces, Wit and Spirit all over; the Large and Gigantick is surprising and full of Majesty. If she stammers and cannot speak, then she lisps; she is modest if she is dumb; but the Turbulent, the Violent and the Talkative, is all Fire. If she is worn away with a Consumption, she is my slender Love; you may span her in the Waist if she is dying with a Cough. The two-handed Virago, with her full Duggs, is *Ceres* herself, a Bedfellow for *Bacchus*; the Flat-nosed is my *Silene*, a little Satyr; the pouting Lip is a very Kiss. It would be endless to say all that might be offered upon this Subject.

Sed tamen esto jam quantovis oris honore,
Quoi Veneris membris vis omnibus exoriatur :
Nempe aliæ quoque sunt, nempe hac sine viximus antè ;
Nempe eadem facit, & scimus facere omnia turpi :
Et miseram tetris se suffit odoribus ipsa,
Quam famulæ longè fugitant, furtimque cachinnant.
At lacrymans excluſus Amator limina sæpe
Floribus & Sertis operit, postesque superbos
Unguit Amaracino, & foribus miser oscula figit.
Quem si jam admissum, venientem offenderit aura
Una modo, causas abeundi quærat honestas:
Et meditata diu cadat altè sumpta querela :
Stultitiæque ibi se damnet, tribuisse quod illi
Plus videat, quàm mortali concedere par est.
Nec Veneres nostras hoc fallit : quò magis ipsæ
Omnia summopere hos vitæ postscenia celant.
Quos retinere volunt, adstrictosque esse in amore :
Nequicquam : Quoniam tu animo tamen omnia possis
Protrahere in lucem, atque omneis anquirere nisus.
Et si bello animo'st, & non odiosa vicissim,
Prætermittet te humanis concedere rebus.
Nec mulier semper ficto suspirat amore :
Quæ complexa viri corpus cum corpore jungit.
Et tenet adsuctis humectans oscula labris.
Nam facit ex animo sæpe, & communia quærens
Gaudia, sollicitat spatium decurrere amoris :
Nec ratione alia Volucres, Armenta, Feræque,

But allow your Miſtreſs all the Advantages of Beauty in her Face, that Charms of Love ariſe from every Limb, yet there are others as lovely as ſhe, and Time was when you lived without her; and we know ſhe plays the ſame Game that homelier Women can do as well. And then ſhe perfumes, rank as ſhe is with filthy Smells, that her Maids cannot come near her, but make a Jeſt of her when they are not ſeen.

But when the Lover is ſhut out, and all in Tears crowns the Gates with Flowers and Garlands, and pours Ointments upon the ſtately Pillars, and the Wretch warms the very Doors with his Kiſſes; yet when he is admitted, and one Blaſt from her Armpits ſtrikes full upon him as he enters, he preſently ſeeks for a plauſible Reaſon to be gone, and all his long-laboured Speeches of Complaint are forgotten, and he condemns himſelf of Folly for raiſing ſuch Ideas of her Beauty, which no Mortal could lay Claim to. This Secret is well known to Women of the Town; and they act cunningly behind the Scenes as it were, and conceal their Failings from thoſe whoſe Love they would ſecure fixed and laſting to themſelves: But all to no Purpoſe; for you may eaſily imagine how Things are, and diſcover all, and prevent their utmoſt Endeavours to deceive you. And if your Miſtreſs be of an open Temper, and not ſullen and reſerv'd, ſhe will not ſo much as hide her Defects, but hope you will allow for Imperfections that are common to the whole Sex.

Nor does the Woman always breathe with feigned Deſire when joined in ſtrict Embrace with him ſhe loves, when ſhe holds him cloſe, and on his preſſed Lips imprints her balmy Kiſſes; for ſhe often does it heartily, and ſtrives to ſhare the common Joy, and run the Heats with Vigour to the Goal. Nor for any other Reaſon would Birds,

Et Pecudes, & Equæ maribus subsidere possent,
Si non, ipsa quòd illorum subat, ardet abundans,
Natura, & venerem salientum læta retractat.
Nonne vides etiam, quos mutua sæpe voluptas
Vinxit, ut in vinclis communibus excrucientur?
In triviis non sæpe Canes discedere aventes,
Divorsi cupidè summis ex viribu' tendunt,
Cùm interea validis Veneris compagibus hærent?
Quod facerent nunquam, nisi mutua gaudia nôssent:
Quæ lacere in fraudem possent, vinctosque tenere.
Quare etiam atque etiam (ut dico) est communi' voluptas.
Et commiscendo cùm Semen fortè virile
Fœmina commulxit subita vi, conripuitque;
Tum similes Matrum materno semine fiunt:
Ut Patribus patrio: sed quos utriusque figuræ
Esse vides juxtim, miscenteis volta Parentum:
Corpore de Patrio, & Materno sanguine crescunt,
Semina quom Veneris stimulis excita per artus
Obvia conflixit conspirans mutuus ardor:
Et neque utrum superavit eorum, nec superatum'st.
Fit quoque, ut interdum similes exsistere Avorum
Possint, & referant Proavorum sæpe figuras,
Propterea, quia multa modis primordia multis
Mista suo celant in corpore sæpe Parentes,
Quæ Patribus Patres tradunt à stirpe profecta.
Inde Venus varia producit sorte figuras:
Majorumque refert voltus, voceſque, comasque.
Quandoquidem nihilo minùs hæc de semine certo
Fiunt, quam Facies, & Corpora, Membraque nobis.
Et Muliebre oritur patrio de semine sæclum:
Maternoque mares exsistunt corpore creti.
Semper enim partus duplici de semine constat:

Atque,

and Herds, and wild Beaſts, and Cattle, and Mares, bear the Weight of the Male, if they did not burn and rage with equal Heat, and ſo receive with Joy the luſty Leap. Don't you obſerve how thoſe whom mutual Pleaſure has bound faſt, are tortured as it were in common Bonds? how Dogs in the Street are ſtriving to untie the Knot, and pull with all their Might a different Way, yet they ſtick faſt in the ſtrong Ties of Love? This they would never do if not engaged in mutual Joys, which cheat them with Delight and hold them faſt. The Pleaſure then is common to them both.

Why the Child like the Parents.

IF, in the mixing of the Seed, the Female draws in and ſnatches with ſudden Force the Male Seed, the Child, the Female Seed prevailing, is like the Mother, as he is like the Father if his prevails. But Thoſe who, you obſerve, expreſs jointly the Reſemblance, and mingle the Features of both Parents, are formed equally from the Juices of both; for then the mutual Ardor of the Combatants has juſtly tempered the conflicting Seed, which, raiſed by the Stings of *Venus*, is ſent in due Proportion through all the Limbs. The Succeſs of the Battle is equal, neither is Victor nor vanquiſhed. It happens ſometimes that Children are like their Grandfathers, and reſemble the Perſons of their remote Anceſtors, becauſe the Parents have frequently many Seeds concealed, and variouſly mingled in their Bodies, which preſerve the Features of the Family, and are delivered down from one to another. Theſe *Venus* forms into different Figures, as the Qualities of the Seeds require, and repreſents the Complexion, the Voice and Hair of the Progenitors; for Theſe no leſs ariſe from proper Seeds, than the Face, the Body or any Parts of it. And a Female Child proceeds partly from the Father's Seed, and a Male from the Mother's, for the Iſſue always conſiſts of the Seed of both;

Or like their Grandfathers.

Atque, utri ſimile eſt magis id, quodcunque creatur,
Ejus habet plus parte æqua, quod cernere poſſis,
Sive Virûm ſuboles ſive 'ſt Muliebris origo.

Nec divina ſatum genitalem Numina quoiquam
Abſterrent, pater à natis ne dulcibus unquam
Appelletur, & ut ſterili Venere exigat ævum ;
Quod plerique putant : Et multo ſanguine mœſti
Conſpergunt aras, adolentque altaria donis,
Ut gravidas reddant uxores ſemine largo :
Nequicquam Divûm numen, ſorteiſque fatigant.
Nam ſteriles nimium craſſo ſunt ſemine partim :
Et liquido præter juſtum, tenuique viciſſim.
Tenue, locis quia non potis eſt adfigere adhæſum,
Liquitur extemplo, & revocatum cedit ab ortu :
Craſſius hoc porro, quoniam concretius æquo
Mittitur ; aut non tam prolixo provolat ictu,
Aut penetrare locos æquè nequit ; aut penetratum,
Ægrè admiſcetur muliebri Semine Semen.

Nam multùm harmoniæ Veneris differre videntur.
Atque alias alii complent magis, ex aliiſque
Suſcipiunt aliæ pondus magis, inque graveſcunt.
Et multæ ſteriles Hymenæis antè fuerunt
Pluribus, & nactæ poſt ſunt tamen, unde puellos
Suſcipere, & partu poſſent diteſcere dulci :
Et, quibus antè domi fœcundæ ſæpe nequiſſent
Uxores parere, inventa 'ſt illis quoque compar
Natura, ut poſſent natis munire ſenectam.

both; but the greater Likeneſs it bears to the one than to the other, it partakes of more than a juſt Proportion of the Seed of that Sex, which you eaſily appehend, whether the Child be Male or Female.

Of Barrenneſs.

[r] NOR do the *Divinities* above ever deſtroy the prolific Virtue of the Seed, or prevent a Man's being called Father by a Number of ſweet Children, or curſe him all his Life with unfruitful Love, as ſome vainly think, and therefore with much Concern ſtain the Altars with the Blood of many Victims, and make them ſmoke with Clouds of Incenſe, to implore a Bleſſing upon the ſhowery Seed and promote Conception; but to no Purpoſe they tire out the *Gods* and fatigue the Oracles, for they are frequently unfruitful, becauſe the Seed is too thick or too thin. The thin Seed will not ſtay in the Parts where it was injected, but ſoon diſſolves and flows back; and the Thick has no Effect, becauſe it is ſent out heavy and condenſed, or it does not carry home to the Mark, or it cannot rightly penetrate the Paſſages, or if it does, it is not at all diſpoſed to mix kindly with the Female Juice.

FOR the Harmony of Love between the Sexes is widely different; Men are more prolific with ſome Women, and Women conceive more readily, and ſwell with their Burden after the Embrace of ſome Men, than with others. Many Women have been barren in a firſt and ſecond Marriage, and been fruitful at laſt, have borne luſty Boys, and bleſſed the Family with a ſweet Offspring; and Men, after marrying ſeveral Times without Iſſue, have at length found out a Wife of a Conſtitution agreeable to their own, and ſupported their old Age

[r] The Poet, after his uſual Cuſtom, falls foul upon the *Gods* and ſays, 'Tis to no Purpoſe to apply to them for Children, for they never curſe with Barrenneſs either Man or Woman.

Usque adeo magni refert, ut Semina possint
Seminibus commisceri genitaliter apta,
Crassaque conveniant liquidis, & liquida crassis,
Quæ quoi juncta viro sit fœmina per Veneris res.
Atque adeo refert, quo victu vita colatur.
Namque aliis rebus concrescunt Semina membris,
Atque aliis extenuantur, tabentque vicissim.
Et quibus ipsa modis tractetur blanda Voluptas,
Id quoque permagni refert: Nam more Ferarum,
Quadrupedumque magis ritu, plerumque putantur
Concipere Uxores, quia sic loca sumere possunt
Pectoribus positis, sublatis Semina lumbis.
Nec molles opu' sunt motus Uxoribus hilum.
Nam Mulier prohibet se concipere, atque repugnat,
Clunibus ipsa viri Venerem si læta retractet:
Atque exossato ciet omni pectore fluctus.
Eicit enim Sulci recta regione, viaque
Vomerem, atque locis avertit Seminis ictum.
Idque sua causa consuerunt Scorta moveri,
Ne complerentur crebrò, gravidæq; jacerent,
Et simul ipsa viris Venus ut concinnior esset:
Conjugibus quod nil nostris opus esse videtur.
Nec divinitus est interdum, Veneriscque sagittis
Deteriore fit ut forma Muliercula ametur.

Nam

with many Children. Of ſo great Concern it is, that the Seed of both ſhould kindly mix, and mutually glow with genial Heat; that the Thick and the Thin ſhould incorporate together; and that the Woman, in the Art of Love, ſhould engage with a Man whoſe Nature ſhould be ſuitable to her own.

AND the Food we live upon is of no ſmall Importance; for the Seed increaſes through the Limbs by ſome Meats, and it becomes watery and feeble by others.

I can tranſlate no further. Dryden, *in his* Miſcellanies, *goes on in full Vigour, and keeps up to the Original.*

OF like Importance is the Poſture too,
In which the genial Feat of Love we do.
For, as the Females of the Four-foot Kind
Receive the Leapings of their Males behind;
So the good Wives, with Loins uplifted high,
And leaning on their Hands, the fruitful Stroke may try.
For in that Poſture they will beſt conceive;
Not when ſupinely laid they friſk and heave:
For active Motions only break the Blow,
And more of Strumpet than of Wives they ſhew;
When anſwering Stroke with Stroke, the mingled Liquors flow.
Endearment eager, and too briſk a Bound
Throw off the Plough-ſhare from the furrow'd Ground.
But common Harlots in Conjunction heave,
Becauſe 'tis leſs their Buſ'neſs to conceive
Than to delight and to provoke the Deed;
A Trick which honeſt Wives but little need.

NOR is it from the *Gods*, or the Darts of *Venus*, that a Woman of ordinary Beauty is ſometimes beloved. She often ſecures the Affection by her diſcreet

Nam facit ipſa ſuis interdum Fœmina factis,
Morigeriſque modis, & mundo corpori' cultu,
Ut facilè inſueſcat ſecum Vir degere vitam.
Quod ſupereſt, Conſuetudo concinnat amorem.
Nam leviter quamvis, quod crebro tunditur ictu,
Vincitur in longo ſpatio tamen, atque labaſcit.
Nonne vides, etiam guttas in ſaxa cadentes
Humoris longo in ſpatio pertundere ſaxa?

discreet Conduct, by the Sweetness of her Deportment, and an Exactness in the Decency of her Person; so that a Man, by Use, may spend his Life happily with her.

To sum up all: It is Custom that reconciles the Delights of Love; for beat upon any thing with constant Blows, though ever so lightly, it is overcome at last, and crumbles to Pieces. Have not you observed how Drops of Water falling upon a hard Stone, by Length of Time, wear it away?

The End of the Fourth Book.

THE

THE ARGUMENT OF THE FIFTH BOOK.

THE Poet begins this Book with the Praiſe of Epicurus, *whom he proclaims to be a* God, *becauſe his Divine Diſcoveries have been more uſeful to Mankind than the Inventions of* Ceres, *or of* Bacchus, *or than the many glorious Exploits of* Hercules. *He then lays down the Argument of this Book, and ſhews the Connection between the Subjects he is now going to treat of, and thoſe of which he has diſputed in the preceding Parts of his Poem; and being now to explain the firſt Riſe and future Diſſolution of the World, he teaches that the Earth, the Sea, the Heavens, the Sun and Moon, are mortal; that they are not animated nor endowed with a Divine Body, nor, as the* Stoicks *believed, are they Parts of* God *himſelf. He aſſerts that neither the Heavens, as the general Opinion is, nor indeed any Part or Parts of the World, are the Manſions or Abodes of the* Gods; *and that none may believe that the World was made by the* Gods, *and is therefore immortal, he heaps up ſeveral Reaſons, drawn as well from the Nature of the* Gods *as from the Defectiveneſs and ill Contrivance of this vaſt Frame of the Univerſe, by which he endeavours to prove that it*

it was not the Workmanſhip of a Deity. *He argues that the Four Elements, Earth, Water, Air and Fire, of which the World conſiſts, are nevertheleſs generated and mortal; and conſequently that the World itſelf once had a Beginning, and will have an End. And he proves, by ſeveral other Arguments, that this univerſal Frame has not exiſted from all Eternity, nor will be immortal and remain undiſſolved to all Futurity. Then he deſcribes the Riſe or Birth of the World; and among all the Phyſiologers there is not a Deſcription of it more likely to be true, nor more lively and beautiful. The Atoms are moved by their own Weight; they meet; this makes them rebound; and according to the Difference of the Stroke or Weight, the Reſilition is made into different Places, where they combine and grow into Bodies. He propoſes many Difficulties concerning the Motions of the Heavens and of the Planets, but determines nothing. He teaches why the whole Frame of the Earth, which is a heavy Body, hangs in the Air without being ſupported by any Foundation; and then takes the Dimenſions of the Sun, Moon and Stars, and pronounces them neither bigger nor leſs than they ſeem to us to be. He gives ſeveral Reaſons of the Summer and Winter Solſtices; tells what cauſes Night; why* Aurora, *or the Morning, precedes the Sun; why the Nights and Days mutually overcome, and chace away each other by turns; why the Moon changes her Face and Figure, and why the Sun and Moon are ſometimes eclipſed. He deſcends from the Heavens, and deſcribes the firſt Riſe of Herbs, Trees, Birds, Beaſts and Man, and adjuſts the Order in which each Kind was produced out of the Earth. He ſays that Monſters, or certain imperfect Animals, might be produced in the Beginning of the World, but Nature denied them the Power to propagate their Kinds. Hence he takes Occaſion to deride and explode all* Chimæra's, Centaurs, Scylla's, *and*

and other fabulous Productions, invented by the Poets; and denies there ever were any such Prodigies of Nature, or ever will be. He describes the Strength of the first Men, their robust Constitution of Body, their Meanness of Living, their Food, Wit, Manners, Houses and Marriages. He teaches that after Fire was cast down upon Earth by Lightning, Men began to be more civilized; and having invented the dressing of Meat, fared more deliciously than before. Then they first established Societies, entered into Leagues and Alliances, divided the Land among themselves, and chose Kings to govern them, who were either the most strong, the most beautiful, or the most witty among them, and were elected for one or more of these three Reasons. But at length Gold being found out, the Richer commanded the Poorer; and Envy springing up among them, a Sedition arose, the Kings were deposed, Republicks were instituted, and Laws established to secure every one in his Property. He treats of the Fear of the Gods, *and of the first Rise of Religion, which he ascribes merely to Ignorance of the Divine Nature, and of natural Causes. And to the End of the Book he teaches how the several Metals, Gold, Silver, Brass, Iron and Lead, came first to be discovered. He mentions the first Arts of War, and the Weapons then used; and concludes with the Invention and Progress of Spinning, Weaving, Agriculture, Sailing, Musick, Poetry and other Arts.*

T. Lu-

T. Lucretii Cari

DE

RERUM NATURA.

LIBER QUINTUS.

QUIS potis eſt dignum pollenti pectore carmen
Condere, pro rerum majeſtate, hiſque repertis?
Quiſve valet verbis tantùm, qui fundere laudes
Pro meritis Ejus poſſit, qui talia nobis
Pectore parta ſuo, quæſitaque præmia liquit?
Nemo (ut opinor) erit mortali corpore cretus.
Nam ſi, ut ipſa petit majeſtas cognita rerum,
Dicendum'ſt: Deus ille fuit, Deus, inclute Memmi,

Qui

only to their own Philosophy.

C. Elliger. Invenit

G. v. Gouwen. Sculp. Amst.

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE

FIFTH BOOK.

WHO can, with all his Soul inſpired, compoſe fit Numbers, worthy the Majeſty of ſo great Things, of theſe Diſcoveries? Or who, in Words alone, can ſing [a] His Praiſe, and equal His Deſerts, who from the Labour of his Mind has left ſuch Benefits, and beſtowed Rewards ſo glorious on Mankind? No mortal Man alive, as I conceive; for could I raiſe my Verſe to reach the Dignity of Things He knew, He was a *God*, my Noble *Memmius*, a

[a] He makes a *God* of *Epicurus*, and ſays his Diſcoveries are more uſeful to Mankind than the Inventions of *Ceres* and *Bacchus*, and the Labours of *Hercules*. He taught true *Wiſdom*, which drives all Uneaſineſs from the Mind, and inſtructs us rightly in the Nature of Things; for the *Epicureans* were ſo modeſt, that the Name of *Wiſdom* they applied only to their own Philoſophy.

Qui Princeps vitæ rationem invenit eam, quæ
Nunc appellatur SAPIENTIA : *quiq; per artem*
Fluctibus è tantis vitam, tantisque tenebris,
In tam tranquillo, & tam clara luce locavit.
Confer enim Divina aliorum antiqua reperta.
Namque Ceres fertur fruges, Liberque liquoris
Vitigeni laticem mortalibus instituisse ;
Cùm tamen his posset sine rebus Vita manere :
Ut fama'st aliquas etiam nunc vivere genteis.
At benè non poterat sine puro pectore vivi.
Quò magis hic meritò nobis Deus esse videtur,
Ex quo nunc etiam per magnas dicta genteis
Dulcia permulcent animos solatia vitæ.
Herculis antistare autem si facta putabis,
Longiùs à vera multò ratione ferere ;
Quid Nemæus enim nobis nunc magnus hiatus
Ille Leonis obesset, & horrens Arcadius Sus ?
Denique quid Cretæ taurus, Lernæaque pestis
Hydra venenatis posset vallata colubris ?
Quidve tripectora tergemini vis Geryonaï ?
Et Diomedis equi spirantes naribus ignem
Thracen, Bistoniasque plagas, atque Ismara propter,
Tantopere officerent nobis ? Uncisque timendæ
Unguibus Arcadiæ volucres Stymphâla colentes ?
Aureaque Hesperidum servans fulgentia mala
Asper, acerba tuens, immani corpore Serpens,
Arboris amplexus stirpem : quid deniq; obesset,
Propter Atlantæum littus, pelageque severa,
Quò neque noster adit quisquam, neque Barbarus audet ?
Cætera de genere hoc quæ sunt portenta peremta,
Si non victa forent, quid tandem viva nocerent ?
Nil, ut opinor : Ita ad satiatem terra Ferarum

Nunc

God he was, who firſt found out that Rule of Life which is now called *True Wiſdom*; and who this human Life, ſo toſſed with Storms, and ſo o'erwhelmed in Darkneſs, has rendered by his Art ſo calm, and placed in ſo clear a Light.

COMPARE the Benefits long ſince found out by Thoſe who now are *Gods*. *Ceres*, they ſay, diſcovered firſt the Uſe of Corn, and *Bacchus* gave to Men the Knowledge of the Vine and its ſweet Juice. Yet Men might ſtill have lived without both theſe, as many Nations, we are told, do now. But no true Life could be, without the Mind eaſy and free; and therefore with better Right is he to us a *God*, whoſe gentle Rules, received throughout the World, beſtowed on Men Tranquility and Peace.

IF you ſhould think the great Exploits of *Hercules* exceeded His, you are carried far from Truth. For how could the wide, gaping Jaws of the *Nemæan* Lion, or the terrible *Arcadian* Boar, affright us now? How could the Bull of *Crete*, or *Hydra*, the Plague of *Lerna*, incompaſſed with his poiſonous Snakes? Or *Geryon*, with his tripple Face, and the collected Strength of his three Bodies? Or what can we now ſuffer from *Diomedes'* Horſes, from their Noſtrils breathing Fire, dreadful to *Thrace*, the *Biſtonian* Plains, and all about Mount *Iſmarus?* Or what from the *Arcadian* Birds of *Stymphalus*, feared for their crooked Talons? Or that huge Dragon, fierce and terrible in Look, that, twining round the Tree, guarded the Golden Fruit of the *Heſperides?* How could he hurt us here, removed far from us near the *Atlantick* Shore, and the rough Seas, where neither *Roman* nor *Barbarian* dared to viſit? And other Monſters which that Hero ſlew, had they not been ſubdued, how could they hurt us now, were they alive? Not in the leaſt, I think. For now the World abounds

Nunc etiam ſcatit, & trepido terrore repleta'ſt
Per nemora ac monteis magnos, ſylvaſque profundas:
Quæ loca vitandi plerumque eſt noſtra poteſtas.
At niſi purgatum'ſt pectus, quæ prælia nobis,
Atque pericula tunc ingratîs inſinuandum?
Quantæ conſcindunt hominem Cuppedinis acres
Sollicitum curæ? Quantique perinde timores?
Quidve Superbia, Spurcities, Petulantia, quantas
Efficiunt cladeis? Quid Luxus, Deſidieſque?
Hæc igitur qui cuncta ſubegerit, ex animoque
Expulerit dictis, non armis; nonne decebit,
Hunc Hominem numero Divûm dignarier eſſe?
Cùm bene præſertim multa, ac divinitus ipſis
Immortalibu' de Divis dare dicta ſuërit;
Atque omnem rerum Naturam pandere dictis.
Quoius ego ingreſſus veſtigia, nunc rationes
Perſequor, ac doceo dictis, quo quæque creata
Fœdere ſint, in eo quàm ſit durare neceſſum:
Nec validas ævi valeant reſcindere leges.
Quo genere in primis Animi natura reperta'ſt,
Nativo primo conſiſtere corpore creta:
Nec poſſe incolumis magnum durare per ævum:
Sed Simulacra ſolere in ſomnis fallere mentem,
Cernere cùm videamur eum, quem vita reliquit.
Quod ſupereſt, nunc me huc Rationis detulit ordo,

Ut

with frightful Beasts, that fill with dreadful Terror the Forests, the high Mountains and thick Woods; yet these Places commonly 'tis in our Power to avoid.

But unless the Mind be purged, what Wars within, what Dangers wretched Mortals must endure? What piercing Cares of fierce Desire must tear the Minds of Men? And then, what anxious Fears? What Ruin flows from Pride, from Villany from Petulance? What from Luxury and Sloth?

The Man therefore that has subdued these Monsters, and drove them from the Mind by Precept, not by Force; should not this Man be worthy to be numbered with the *Gods?* especially since of these Immortal Deities he has spoken nobly and at large, and by his Writings has explained to us the Laws of Universal Nature?

His Steps I follow, and now pursue his Rules, and by my Verse I teach, that Things must needs subsist by the same Laws by which they were first formed; nor can they break through the strong Bonds that Nature has fixed to their Being. Of this sort the Soul, in the first Place, I have proved to be originally derived from mortal Seeds, nor can it remain eternally undissolved; and that Images commonly deceive the Mind in our Dreams, when we fancy we see a Person that has been long since dead.

And what remains but now, [b] as the Order of

[b] In this Book he proposes to shew, that the World had a Beginning, and will have an End; to describe the Rise of the World, and of Animals real and feigned by the Poets; how Names came to be given to Things; how mutual Society arose from Speech, whence proceeded Religion and the Fear of the *Gods.* And then he will explain the Motions of the Heavens, the Courses and Revolutions of the Sun, the Moon, and other Planets and Stars; and demonstrate that they are whirled about by the Force of Nature only, without the Help or Assistance of Providence.

Ut mihi, mortali consistere corpore Mundum,
Nativumque simul, ratio reddunda sit, esse.
Et quibus ille modis congressus Materiai
Fundârit Terram, Cœlum, Mare, Sidera, Solem,
Lunaïque globum ; tum quæ tellure Animantes
Exstiterint : Et quæ nullo sint tempore natæ.
Quove modo genus Humanum variante loquela
Cœperit inter se vesci per nomina rerum :
Et quibus ille modis Divûm metus insinuârit
Pectora, terrarum qui in orbi sancta tuetur
Fana, Lacus, Lucos, Aras, Simulacraque Divûm.
Præterea, Solis cursus, Lunæque meatus
Expediam, qua vi flectat Natura gubernans :
Ne fortè hìc inter Cœlum, Terramque reamur
Libera sponte sua cursus lustrare perenneis,
Morigera ad fruges augendas, atque animanteis :
Neve aliqua Divûm volvi ratione putemus.
Nam, bene qui didicere Deos securum agere ævum,
Si tamen interea mirantur qua ratione
Quæque geri possint, præsertim rebus in illis,
Quæ supera caput ætheriis cernúntur in oris ;
Rursus in antiquas referuntur Relligiones,
Et Dominos acreis adsciscunt, omnia posse
Quos miseri credunt, ignari quid queat esse,
Quid nequeat ; finita potestas denique quoique
Quanam sit ratione, atque alìè terminus hærens.
Quod superest, ne Te in promissis plura moremur,
Principiò, Maria ac Terras, Cœlumque tuere :
Horum naturam triplicem, tria corpora, Memmi,

Treis

my Design requires to convince, by proper Reasons, that this World is formed of mortal Seeds; that it began to be, and must have an End; and to shew how the Seeds of Matter were united and disposed, to produce the Earth, the Heavens, the Sea, the Stars, the Sun and Moon; and then what Creatures sprung from the Earth, and what never had a Being; and how the human Race, with various Language, began to give Names to Things, and to converse together.

And by what means that Dread of Deities above, first crept into the Heart, which preserves the Holy Things throughout the World; the Temples, the Lakes, Groves, Altars, and Images of the *Gods*.

Besides, I shall explain the Course of the Sun and Moon, and by what over-ruling Force Nature directs their Motions; lest you should suppose these Luminaries travel their constant Stages freely and of their own accord between Heaven and Earth, and by their kind Influence promote the Growth of Fruits and the whole Animal Creation; or conceive that they are rolled about by the Will of the *Gods*. For those who well know that the *Gods* live a Life of Ease, if they should wonder by what Power the World is carried on, especially in the Things they see over their Heads in the Heavens above, they relapse again into their old Superstition; they raise over themselves a Set of cruel Tyrants, who the Wretches fancy can do all Things, because they know nothing of what can or what cannot be, or by what means a finite Power is fixed to every Being, and a Boundary immoveable which it cannot pass.

And therefore, to keep you no longer in Suspense in what I promised, take a View, in the first Place, of the Seas, the Earth and the Heavens; this triple Nature, these three Bodies, my *The World mortal.*

Treis ſpecies tam diſſimileis, tria talia texta,
Una dies dabit exitio: multoſque per annos
Suſtentata ruet moles & machina Mundi.
Nec me animi fallit, quàm res nova, miraque menti
Accidat, Exitium Cæli Terræque futurum:
Et quàm difficile id mihi ſit pervincere dictis:
Ut fit, ubi inſolitam rem adportes auribus antè,
Nec tamen hanc poſſis Oculorum ſubdere viſu,
Nec jacere indu Manus, via quà munita fidei
Proxima fert humanum in pectus, templaque mentis:
Sed tamen effabor: dictis dabit ipſa fidem res
Forſitan, & graviter terrarum motibus orbis
Omnia conquaſſari in parvo tempore cernes:
Quod procul à nobis flectat Fortuna gubernans:
Et Ratio potiùs, quàm Res perſuadeat ipſa,
Succidere horriſono poſſe omnia victa fragore.
Qua priùs aggrediar quàm de re fundere fata
Sanctiùs, & multò certa ratione magis quàm
Pythia, quæ tripode è Phœbi, lauroque profatur;
Multa tibi expediam doctis ſolatia dictis:

Relligione

Memmius, three Beings of so different a Frame, three so wonderfully formed, one Day shall put an End to; and the whole Mass and Fabrick of the World, that has stood for many Ages, shall tumble to Pieces.

I know how this, this future Ruin of Heaven and Earth, seems strange and surprising to your Apprehensions, and how difficult it is to convince you of the Truth of it. This is a common Case, when you offer a Subject to the Ear it has been unused to, and which you cannot discover with your Eyes, nor feel with your Hands, the Ways by which Knowledge and Belief generally find a Passage to the Breast, and affect the Mind. I'll go on however. The very Nature of the Things perhaps will give a Credit to my Words, and you may soon see the whole Fabrick of the World shaken grievously by terrible Convulsions; but the commanding Power of Chance remove that Day far from us! And let Reason, rather than the Thing itself, convince us, that all Things dissolved by the last dreadful Crack will fall to Ruin.

[c] But before I attempt to teach these Truths, more sacred and much more worthy of Belief than what the *Pythoness* delivers from the Tripod and Laurel of *Apollo*, I shall first offer some Encouragements against your Fears, lest, being under

[c] Many of the old Philosophers, *Pythagoras*, *Plato*, *Trismegistus* and others, believed the World to be endued with a rational Soul, and to partake of the Nature of the *God* that made it. They considered the admirable Order and Connection of all the Parts of the Universe, which they were persuaded could not be sustained but by a Soul intrinsically informing, ordering, disposing and connecting them. The *Stoicks* went further, and held, that every one of the celestial Bodies that have Motion, were to be esteemed in the Number of the *Gods*. They observed a Constancy in the Revolutions of the Heavens, and in the Courses of the Stars; and therefore concluded their Motion to be voluntary, and consequently that they are *Gods*.

the

Relligione refrænatus ne fortè rearis,
Terras, & Solem, Cœlum, Mare, Sidera, Lunam,
Corpore divino debere æterna manere:
Proptereaque putes ritu par esse Gigantum,
Pendere eos pœnas immani pro scelere omneis,
Qui ratione sua disturbent mœnia Mundi,
Præclarumque velint cœli restinguere Solem,
Immortalia mortali sermone notantes.
Quæ procul usqueadeo divino ab numine distent,
Inque deûm numero sic sunt indigna videri,
Notitiam potiùs præbere ut posse putentur,
Quid sit vitali motu, sensuque remotum.
Quippe etenim non est cum quovis corpore ut esse
Posse Animi natura putetur, Consiliumque.
Sicut in æthere non Arbor, nec in æquore salso
Nubes esse queunt, neque Pisces vivere in arvis;
Nec Cruor in lignis, nec saxis Succus inesse:
Certum, ac dispositum'st, ubi quicquid crescat, & insit.
Sic Animi natura nequit sine Corpore oriri
Sola, neque à nervis, & sanguine longiter esse.
Hoc si posset enim, multò priùs ipsa Animi vis
In Capite, aut Humeris, aut imis Calcibus esse
Posset, & innasci quavis in parte soleret:
Tandem in eodem homine, atque in eodem vase maneret.
Quod quoniam nostro quoque constat Corpore certum,
Dispositumque videtur, ubi esse, & crescere possit
Seorsum Anima, atque Animus: tantò magis insiciandum,
Totum posse extra Corpus, formamque animalem
Putribus in glebis Terrarum, aut Solis in igni,

Aut

the Check of Religion, you ſhould by chance imagine that the Earth, the Sun, the Heavens, the Sea, the Stars, the Moon, being animated by a Spirit diffuſed throughout the Whole, were a Deity, and would remain for ever; and conſequently, that all thoſe deſerve juſtly the ſame Puniſhment as the Rebel Giants, for their Impiety, who by their Arguments would aſſault and break down the Walls of the World, and would extinguiſh the Sun (the bright Luminary of the Sky) and pronounce a Sentence of Diſſolution upon Things in their own Nature immortal.

The World not an Animal.

AND yet theſe Things are ſo far from having any thing of Divinity about them, and ſo unworthy of being ranked in the Number of the *Gods*, that they may be thought rather to give us a Notion of ſomething as remote from Senſe and vital Motion as poſſible; for we are not to imagine that the Powers, Mind and Soul, can be united with all ſorts of Bodies. As there are no Trees in the Sky, no Clouds can be in the deep Sea; nor can Fiſh live in the Fields; nor can there be Blood in Wood, or Moiſture in Stones. There are certain and fixed Abodes, where all Things have a Being, and increaſe. The Soul therefore cannot come into Being alone, without the Body; nor can ſhe exiſt ſeparately, without the Nerves and the Blood. If this could be, the Powers of the Soul you would rather feel ſometimes in the Head or Shoulders, or even in the very Bottom of the Feet, or in any other Part of the Body, and ſo you would perceive it diffuſing itſelf through the whole Body: As Water poured into a Veſſel firſt covers one Part, and then ſpreads over the Whole. Since therefore there is a proper and determinate Place in the Body, for the Mind and Soul to be and increaſe in, we have the more Reaſon to deny that they can continue or be born without it, or that the Form of Life can reſide in rotten Clods of Earth, or in the Fire of the Sun, or in the Water,

Aut in Aqua durare, aut altis Ætheris oris.
Haud igitur constant divino prædita sensu,
Quandoquidem nequeunt vitaliter esse animata.
Illud item non est ut possis credere, sedes
Esse Deûm sanctas in mundi partibus ullis.
Tenuis enim natura Deûm, longèque remota
Sensibus à nostris, animi vix mente videtur.
Quæ quoniam manuum tactum suffugit, & ictum,
Tactile nil nobis quod sit, contingere debet.
Tangere enim non quit, quod tangi non licet ipsum.
Quare etiam sedes quoque nostris sedibus esse
Dissimiles debent, tenues de corpore eorum.
Quæ tibi posteriùs largo sermone probabo.
Dicere porro, Hominum causa voluisse parare
Præclaram mundi naturam, propterea que
Id laudabile opus Divûm laudare decere,
Æternumque putare, atque immortale futurum,
Nec fas esse, Deûm quod sit ratione vetusta
Gentibus humanis fundatum perpetuo ævo.
Sollicitare suis ullum de sedibus unquam,
Nec verbis vexare, & ab imo evertere summam:

Cætera

Water, or in the lofty Regions of the Sky. Theſe therefore are ſo far from being endued with a Divine Underſtanding, that they are incapable even of being animated with common Life.

Heaven not the Seat of the Gods.

Nor are you to believe that the [d] Sacred Manſions of the *Gods* are placed in any Parts of this World of ours; for the Nature of the *Gods* is ſo ſubtle, and at ſo remote a Diſtance from our Senſes, that it can ſcarce be apprehended by the Mind. Since therefore it cannot be touched or felt by our Hands, it can touch nothing that is the Object of our Senſes; for nothing has a Power to touch, that is incapable of being touched itſelf. For this Reaſon the Abodes of the *Gods* muſt be far different from ours; they muſt be ſubtle, and anſwerable to their own Nature. But the Truth of This I ſhall more fully prove in another Place.

The World not made for Man.

And then, [e] to ſay that the *Gods* deſigned this noble Fabrick of the World for the ſake of Man, and therefore we are to ſpeak honourably of this excellent Work, and conceive it to be eternal, and ſhall remain for ever; and that it is impious to prove, that this Frame of the World, contrived by the *Gods* to continue for ever for the Uſe of Man, ſhall fall to Ruin; or to offer to diſturb its Duration by Words and Arguments, and ſo overturn Things from their very Founda-

[d] The Abode of the *Gods* is not in the Heavens; for the Nature of the *Gods* is too ſubtle to touch ſuch thick Bodies as the Heavens. Nor can their Abode be in any Part of the Univerſe; for whatever abides or is in any Place, both touches and is touched. But the *Gods*, by reaſon of the Subtilty of their Nature, can do neither.

[e] *Lucretius* impiouſly endeavours to raiſe a Duſt, and blind Men's Underſtandings; and to ſecure his former Opinion, pretends Objections, intermixt with Scoffs, againſt all thoſe who, upon ſober Principles, and a ſtrict Search into the Order and Diſpoſition of Things, were forced to confeſs this Frame to be the Contrivance of ſome intelligent Being, and the Product of Wiſdom itſelf.

tions,

Cætera de genere hoc adfingere, & addere, Memmi,
Desipere'st; quid enim Immortalibus, atque Beatis
Gratia nostra queat largirier emolumenti,
Ut nostra quicquam causa gerere adgrediantur?
Quidve novi potuit tantò post antè quietos
Inlicere, ut cuperent vitam mutare priorem?
Nam gaudere novis rebus debere videtur,
Cui veteres obsunt; sed, cui nil accidit ægri
Tempore in anteacto, cùm pulchrè degeret ævum,
Quid potuit novitatis amorem accendere tali?
An, credo, in tenebris vita, ac mœrore jacebat,
Donec diluxit rerum genitalis origo?
Quidve mali fuerat nobis non esse creatis?
Natus enim debet, quicunque'st, velle manere
In vita donec retinebit blanda voluptas.
Qui nunquam verò vitæ gustavit amorem,
Nec fuit in numero, quid obest non esse creatum?
Exemplum porro gignundis rebus, & ipsa
Notities Hominum, Divis unde insita primùm?
Quid vellent facere ut scirent, animoque viderent?
Quove modo'st unquam vis cognita Principiorum,
Quidnam inter sese permutato ordine possent,
Si non ipsa dedit specimen Natura creandi?

Namque

tions. To pretend and enlarge upon This, and more such Stuff, my *Memmius*, is all Madness; for what Advantage can any Acknowledgments of ours bestow upon Divinities happy and immortal, that they should give themselves any Trouble upon our Account? or what new Pleasure could prevail upon the *Gods*, who lived at Rest for so many Ages before, to desire to change their former State of Ease and Tranquility? Those generally rejoice in a new Condition, who have been unhappy in the Last; but the Man who has felt no Misfortunes in his former State, but has lived pleasantly and undisturbed, what could excite the Love of Novelty in such a One as this? Was the Life of the *Gods* spent in Darkness and Melancholy, till the Structure of the World shone out and cheared their Spirits? or what Evil had we suffered if we had never been created? Indeed, when we are once born, we should strive (whoever he be) to preserve our Life, so long as we find an engaging Pleasure in our Being; but he who never tasted the Love of Life, nor was inrolled among the Living, what Harm could he complain of if he had never been?

BESIDES, what Model had the *Gods* to work by, when they set about the Creation of the World? From whence had they any previous Knowledge of Man, to inform them, and give their Mind an Idea of what they proposed to make? How could they come acquainted with the Powers and Force of the Atoms, and with what they were able to effect by the Change of their Site and Order, if Nature herself had not afforded them first a Specimen of Creation[f]? For the Seeds of Bodies were

[f] It was the Opinion of *Epicurus*, that the World was made by Nature, or rather by a fortuitous Concourse of Atoms. They met without any Premeditation, and mutually cleaved to one another; and thus made all Compound Things, just as it happened, without any pre-conceived Design.

from

Namque ita multa modis multis Primordia rerum
Ex infinito jam tempore percita plagis,
Ponderibusque suis consuerunt concita ferri,
Omnimodisque coire, atque omnia pertentare,
Quæcunque inter se possint congressa creare,
Ut non sit mirum si in taleis disposituras
Deciderunt quoque, & in taleis venere meatus,
Qualibus hæc rerum genitur nunc Summa novando.
Quòd si jam rerum ignorem Primordia quæ sint,
Hoc tamen ex ipsis Cæli rationibus ausim
Confirmare, aliisque ex rebus reddere multis,
Nequaquam nobis divinitus esse paratam
Naturam rerum, tanta stat prædita culpa.
Principiò, quantum Cæli tegit impetus ingens,
Inde avidam partem Monteis, Sylvæque ferarum
Possedere, tenent Rupes, vastæque Paludes,
Et Mare, quod latè Terrarum distinet oras.
Inde duas porro prope parteis fervidus Ardor,
Assiduusque Geli casus mortalibus aufert.
Quod supereſt arvi, tamen id Natura sua vi
Sentibus obducat, ni vis Humana resistat,
Vitaï causa valido consueta bidenti
Ingemere, & terram pressis proscindere aratris.
Si non fœcundas vertentes vomere glebas,
Terraïque solum subigentes cimus ad ortus:
Sponte sua nequeant liquidas existere in auras.

Et

from all Eternity so variously agitated by Blows from without, and driven so about by their own Weight, and tryed every way to unite, and attempted all sorts of Motion that might end at last in the Formation of Things; that no wonder they at last fell into such Dispositions, and so decent Order, as to produce the Universe, and continually preserve and renew it.

The World not made by an intelligent Being.

FOR were I wholly ignorant of the Origin of Things, [g] yet I could prove this Truth from the Heavens, and by many other Reasons, that the Frame of the World was by no means raised by the *Gods* for the Use of Man; so faulty it is, and contrived so ill.

AND first, The Earth, covered over by the violent Whirl of the Heavens; huge Mountains, and Woods, the Harbour of wild Beasts; and Rocks, and vast Lakes; and the Sea, which widely separates the distant Shores, take up a great Part of it; and then the torrid Heat, and continual Cold, rob Mankind almost of two Parts, and make them uninhabitable.

THE fruitful Fields that remain, Nature of herself would spread over with Thorns, if the Labour of Man did not prevent it; if he did not, to preserve Life, force the Earth by constant Toil with strong Tools, and cut it through with the Plough; if we did not turn up the fruitful Clods with the crooked Share, and compel the Soil to exert its Strength, of its own accord it would produce nothing.

[g] He says, that the Work of an all-wise Artist ought to be perfect in all Points, not covered with Mountains, Woods and Lakes, dreadful to behold; not with some Parts chilled with perpetual Frost, and others parched with continual Heat. It should produce Fruits of all Sorts, rather than Thorns, Briers, *&c.* All Things should be easy, beautiful, safe and pleasant. It should be a Work worthy of a wise and bounteous *God*.

Et tamen interdum magno quæsita labore,
Cùm jam per terras frondent, atque omnia florent;
Aut nimiis torret fervoribus ætherius Sol,
Aut subiti perimunt imbres, gelidæque pruinæ,
Flabraque ventorum violento turbine vexant.
Præterea genus horriferum Natura Ferarum,
Humanæ genti infestum, terraque marique,
Cur alit, atque auget? Cur Anni tempora morbos
Apportant? Quare Mors immatura vagatur?
Tum porro Puer, ut sævis projectus ab undis
Navita, nudus humi jacet, infans, indigus omni
Vitali auxilio, cùm primùm in luminis oras
Nixibus ex alvo matris natura profudit:
Vagituque locum lugubri complet, ut æquum 'st,
Cui tantum in vita restet transire malorum.
At variæ crescunt Pecudes, Armenta, Feræque:
Nec crepitacula eis opu' sunt, ne cuiquam adhibenda 'st
Almæ nutricis blanda atque infracta loquela:
Nec varias quærunt Vestheis pro tempore Cæli.
Denique non Armis opus est, non Mœnibus altis,
Queis sua tutentur, quando omnibus omnia largè
Tellus ipsa parit, naturaque dædala rerum.

Principiò,

And yet, when the Fruits are raiſed with great Labour, when they look green upon the Ground, and all Things flouriſh; either the Sun's Rays burn every thing up with their fierce Heat; or ſudden Showers, or piercing Froſts, deſtroy our Hopes; or the Blaſts of Wind, with terrible Hurricanes, blow them away.

And then, why does Nature nouriſh and increaſe the dreadful Race of wild Beaſts, by Sea and Land; the profeſſed Enemies to Human kind? Why do the Seaſons of the Year bring Diſeaſes with them? Why does untimely Death wander every way abroad?

Besides, [h] a Child, like a ſhipwreck'd Mariner caſt on Shore by the cruel Tide, lies naked upon the Ground; a wretched Infant, deſtitute of every Help of Life, as ſoon as Nature, by the Mother's Pangs, has thrown him from the Womb into Light; and then he fills the Air with mournful Cries, as he has Reaſon to do, ſince in the Courſe of Life he has ſuch a Series of Evils to paſs through. But Cattle of every kind, and Herds, and wild Beaſts, grow up with Eaſe: They have no need of Rattles to divert them; they have no Occaſion for the kind Nurſe, by her fond and broken Words, to keep them in Humour; they require no Difference of Dreſs for the ſeveral Seaſons of the Year; they have no need of Arms, nor high Walls, to ſecure their Property; for the Earth, with curious Contrivance, of herſelf produces every thing in Abundance, for the whole Variety of Creatures, to feed and ſupport them.

[h] If the *Gods* (ſays he) had made the World, the Condition of Man would have been better than that of other Animals, yet we plainly ſee it is much worſe; and to weigh Things rightly, Nature ſeems a kind Parent to them, and a croſs Step-mother to us.

Principiò, quoniam Terraï corpus, & Humor,
Aurarumque leves animæ, calidique Vapores,
E quibus hæc rerum consistere Summa videtur,
Omnia nativo ac mortali corpore constant:
Debet tota eadem Mundi natura putari.
Quippe etenim quorum parteis, & membra videmus
Corpore nativo & mortalibus esse figuris;
Hæc eadem ferme mortalia cernimus esse,
Et nativa simul. Quapropter maxima Mundi
Cùm videam membra, ac parteis consumta regigni.
Scire licet, Cæli quoque idem Terræque fuisse
Principiale aliquod tempus, clademque futuram.
Illud in his rebus ne me arripuisse rearis,
Memmi, quòd Terram, atque ignem mortalia sumpsi
Esse: neque Humorem dubitavi, Auraſque perire:
Atque eadem gigni, rursusque augescere dixi:
Principiò, pars Terraï nonnulla perusta
Solibus assiduis, multa pulsata pedum vi
Pulveris exhalat nebulam, nubeisque volantes,
Quas validi toto dispergunt aëre venti:
Pars etiam glebarum ad diluviem revocatur
Imbribus, & ripas radentia flumina rodunt.
Præterea, pro parte sua quodcunque alid auget,
Roditur: & quoniam dubio procul esse videtur
Omniparens, eadem rerum commune sepulcrum:

Ergo

AND further, [1] Since the Body of the Earth, the Water, the light Breath of the Air, and the hot Fire, of which this Univerſe of Things conſiſts, had all a Beginning, and are all formed of mortal Seeds, the Nature of the World muſt be the ſame, and muſt die likewiſe. For a Body, whoſe Parts and Members we know were born, and were produced from mortal Principles, that Being muſt be the ſame in Nature with its Parts; it muſt have a Beginning, and be equally Mortal. And therefore when I obſerve the Four Elements (the great Limbs of the World) are continually changing, are waſted away, and then renewed; I conclude, that the whole World, the Earth and the Heavens, had a Time of beginning, and will in Time fall and be deſtroyed. *The Elements changeable.*

BUT, my *Memmius*, that you may not think I raſhly ſuppoſed what I ſhould have proved upon this Subject, when I ſaid that the Earth and the Fire were mortal, and made no doubt but the Air and the Water were ſo too, and that they began to be, and by degrees increaſed; you are to obſerve, firſt, that ſome Part of the Earth is burnt up by the continual Strokes of the Sun; and much of it, being worn by the continual Treading of the Feet, riſes into flying Clouds of Duſt, which the fierce Winds ſcatter through all the Air; and Part of the Earth, by ſoaking Showers, is turned into Water, and the incroaching Rivers eat away their Banks. Beſides, whatever increaſes another Body with any of its Parts, muſt loſe ſo much from itſelf: And ſince the Earth is certainly the great Parent and common Sepulchre of all Things,

[1] The Nature of the Whole is the ſame with that of its Parts; and ſince the Parts of the World, the Earth, Sea, Air and Fire, are continually changed, ſometimes diminiſhed, ſometimes renewed, it muſt be own'd that the whole Maſs is equally and alike Mortal.

Ergo Terra tibi limatur, & aucta recrescit.
Quod supersit, Humore novo mare, flumina, fonteis
Semper abundare, & latices manare perenneis,
Nil opus est verbis, magnus decursus aquarum
Undique declarat: sed primum quicquid Aquaï
Tollitur, in summaque fit, ut nihil Humor abundet,
Partim quòd validi verrentes æquora venti
Deminuunt, radiisque retexens ætherius Sol:
Partim quòd subter per terras diditur omneis.
Percolatur enim virus, retroque remanat
Materies Humoris, & ad caput amnibus omnis
Convenit; inde super terras fluit agmine dulci,
Qua via secta semel liquido pede detulit undas.
Aëra nunc igitur dicam qui corpore toto
Innumerabiliter privas mutatur in horas.
Semper enim quodcunque fluit de rebus, id omne
Aëris in magnum fertur mare: qui nisi contrà
Corpora retribuat rebus, recreetque fluenteis,
Omnia jam resoluta forent, & in Aëra versa.
Haud igitur cessat gigni de rebus, & in res

Recidere

it muſt ſometimes be diminiſhed, and then increaſe and be renewed again.

And then, the Sea, the Rivers, the Fountains, abound always with ſweet Water, and flow with everlaſting Streams. There is no need of many Words; the prodigious Currents that flow every way into the Sea, prove This effectually. But leſt the Maſs of Waters ſhould grow too great, ſome of it is continually lick'd up, and waſtes away; the ſtrong Winds, bruſhing over its Surface, take off part of its Floud; and a Part the Sun exhales and draws up into the Air, and ſome is divided through the ſubterraneous Paſſages of the Earth: There the ſaline Particles are ſtrained off; and then the Waters flow back, and ſtart up in Fountains, and form themſelves into Rivers, which glide ſweetly with their collected Strength over the Earth, through thoſe Channels where the Streams firſt made their liquid Way.

And now, to ſpeak of the Air [k], which is changed with its whole Body every Moment, in various Manners not to be numbered; for whatever is continually flowing off from Bodies, is carried into the vaſt Ocean of the Air; unleſs the Air therefore reſtored again thoſe Particles to the Bodies from whence they came, and renewed them as they waſted away, all Things had long ſince been changed into Air, and wholly diſſolved. The Air therefore is continually produced from

[k] The Air is changed as well as the Earth and Water, which is proved before. Whatever flows from Bodies is carried into the vaſt Tract of Air; but minute Corpuſcles are continually flowing from all Things, and are conveyed into the Air, where they fly to and fro without waſting. Now unleſs the Air conſtantly reſtored thoſe Corpuſcles to the Bodies from whence they came, all Things by this time would have been waſted to nothing, and totally deſtroyed; therefore Bodies are perpetually changed into Air, and the Air returns again into Bodies.

Recidere assiduè, quoniam fluere omnia constat.
Largus item liquidi fons luminis, ætherius Sol
Inrigat assiduè cœlum candore recenti,
Suppeditatque novo confestim lumine lumen.
Nam primum quicquid fulgoris disperit eij,
Quòcunque accidit: id licet hinc cognoscere possis,
Quòd simul ac primùm nubes succedere Soli
Cœpere, & radios inter quasi rumpere lucis,
Extemplo inferior pars horum disperit omnis;
Terraque inumbratur, qua nimbi cunque feruntur,
Ut noscas splendore novo res semper egere,
Et primum jactum fulgoris quemque perire;
Nec ratione alia res posse in sole videri,
Perpetuò ni suppeditet lucis caput ipsum.
Quin etiam nocturna tibi, terrestria quæ sunt,
Lumina, pendentes Lychni, claræque coruscis
Fulguribus, pingues multa caligine Tedæ,
Consimili properant ratione, ardore ministro,
Suppeditare novum lumen, tremere ignibus instant;
Instant, nec loca lux inter quasi rupta relinquit:
Usqueadeo properanter ab omnibus ignibus ejus
Exitium celeri toleratur origine flammæ.
Sic igitur, Solem, Lunam, Stellasque putandum
Ex alio, atque alio lucem jactare subortu,
Et primum quicquid flammaï perdere semper:

Inviolabilia

Bodies, and continually returns into them again; for Things never remain the ſame, but are in a perpetual Fluctuation.

THE [1] Sun likewiſe, that large Fountain of liquid Light, conſtantly bedews the Heavens with a new Brightneſs, and inſtantly ſupplies one Ray by the Succeſſion of another; its firſt Beams of Light, as ſoon as they have ſhone out die away. This you may collect from hence, that as ſoon as a Cloud interpoſes between the Sun's Orb and Us, and as it were breaks through the Rays of Light, the lower Part of the Beams immediately periſhes, and the Earth, as the Clouds paſs over it, is made dark. This proves that Things require a conſtant Stream of new Rays, and that every firſt Emiſſion of Light dies; nor could Things otherwiſe be ſeen in the Light, unleſs the Sun (the Fountain of Brightneſs) continually ſent out freſh Supplies.

AFTER the ſame manner our nightly Lights that we uſe here below, our hanging Luſtres, our Lamps ſhining with a bright Flame, and fat with oily Smoke, are continually ſending out new Streams of Light by the Help of Fire. They preſs on and diſcharge their trembling Rays without Intermiſſion; they never ceaſe, nor is the Light ever interrupted, or leaves the Place dark for a Moment; ſo ſwiftly is the Deſtruction of the firſt Rays repaired from the conſtant Fire of the Lamps (the Fountains of Light) and a new Beam inſtantly flies off as the old expires. We conclude therefore that the Sun, the Moon and Stars, are continually throwing off new Supplies of Light, and that the firſt Rays they emit periſh and die away;

[1] He proves that Fire periſhes, and is again renewed, by inſtancing the Sun, whoſe firſt Light totally periſhes, and a new Light is created in its Place. This we experience when any Miſt interpoſes between the Sun's Orb and Us.

leſt

Inviolabilia hæc ne credas fortè vigere.
Denique non Lapides quoq; vinci cernis ab ævo?
Non altas Turreis ruere, & putrescere Saxa?
Non delubra Deûm, Simulacraque fessa fatisci?
Nec sanctum numen fati protollere fineis
Posse? Neque adversus naturæ fœdera niti?
Denique non Monumenta virûm dilapsa videmus
Cedere proporro, subitoque senescere casu?
Non ruere avolsos Silices à montibus altis,
Nec validas ævi vireis perferre, patique
Finiti? Neque enim caderent avolsa repente,
Ex infinito quæ tempore pertoleraſſent
Omnia tormenta ætatis privata fragore.
Denique jam tuere Hoc circum, supraque, quod omnem
Continet amplexu terram; quod procreat ex se
Omnia (quod quidam memorant) recipitque peremta:
Totum nativum mortali corpore constat.
Nam quodcunque alias ex se res auget, alitque,
Deminui debet, recreari cùm recipit res.

Præterea,

leſt you ſhould believe theſe Beams remained perfect and undiſſolved, and were eternally the ſame.

BESIDES, don't we obſerve how Stones are worn away by Time? that lofty Towers fall to Ruin, and Rocks moulder to Duſt? that the Temples and Images of the *Gods* are tired with ſtanding, and are forced to give way? [m] Nor can the *Gods* themſelves extend the Bounds of Fate, or ſtrive againſt the Laws of Nature. Don't you ſee the Monuments of Men burſt aſunder at laſt, to grow old, and ſuddenly break in Pieces? that the Rocks are torn, and tumble from the high Mountains, and are unable to bear or reſiſt the mighty Force even of a finite Time? for they would never have fallen with this ſudden Ruin, had they from all Eternity endured the Strokes of Time ſecure and unſhaken.

AND then, [n] look up to thoſe ſurrounding Heavens, that above and below embrace this Body of the Earth; thoſe Heavens which, ſome ſay, produce all Things out of themſelves, and to which all Things are at laſt reſolved. They ſurely had a Beginning, are formed of mortal Seeds, and muſt have an End; for whatever feeds and contributes to the Increaſe of other Bodies, muſt loſe ſome of its Parts, and muſt again be repaired by thoſe Bodies when they are diſſolved.

[m] Some imagine that it was the Opinion of the Ancients, that not only Man, and all created Things, as well animate as inanimate Beings, but that even the *Gods* themſelves, were ſubject to Fate. They held Fate to be unalterable and unavoidable; but in ſuch a manner nevertheleſs they believed, though it could not be wholly prevented, it might however be ſomewhat retarded.

[n] He confutes thoſe who held that all Things proceed from *Æther*, or Heaven, and are reſolved again into Heaven, and yet aſſert that Heaven itſelf is Immortal and Eternal; for whatever is changed into other Things, and is repaired and renewed by thoſe Things when they are reſolved, muſt be Born and Mortal.

FURTHER,

Præterea, si nulla fuit genitalis origo
Terraï & Cœli, semperque æterna fuere:
Cur supera bellum Thebanum, & funera Trojæ,
Non alias alii quoque res cecidere Poëtæ?
Quò tot facta virûm toties cecinere? Nec usquam
Æternis famæ monumentis insita florent?
Verùm (ut opinor) habet novitatem Summa, recensque
Natura'st Mundi, neque pridem exordia cepit.
Quare etiam quædam nunc Artes expoliuntur,
Nunc etiam augescunt; nunc addita Navigiis sunt
Multa: Modò Organici melicos peperere sonores.
Denique Natura hæc rerum, Ratioque reperta'st
Nuper, & hanc Primus cum primis Ipse repertus
Nunc ego sum, in patrias qui possim vertere voces.
Quòd si forte fuisse antehac eadem omnia credis:

Sed

FURTHER, If the Heavens and the Earth had no Beginning, but were from Eternity the ſame, how comes it that no [o] Poets have ſung of any great Events beyond the *Theban* War and the Deſtruction of *Troy?* How came the Exploits of ſo many Heroes to be buried in Oblivion? that none of their great Actions are recorded in the eternal Monuments of Fame, to live for ever? For no other Reaſon, I conceive, but that the Univerſe is of a late Creation, that the Subſtance of the World is New, and began not long ago. And therefore ſome Arts are but lately known, others are poliſhed and refined, many new Diſcoveries are made in Navigation, and the Maſters of Muſick have but now brought Sound and Harmony to Perfection; and, in the laſt place, This very *Nature of Things*, which I now write of, and the Reaſons of them, are but lately found out, and I call myſelf One of the Firſt who have attempted to convey them to Poſterity in *Latin* Verſe.

BUT [p] if you ſhould think that theſe Things

[o] He aſſerts the World muſt be New, becauſe the moſt ancient of all Hiſtory reach no farther than the *Theban* or *Trojan* Wars; and certainly if the World, far from being Eternal, were much older than we know it to be, we ſhould have had Records of a much older Date: And farther, becauſe all the Arts are but of late Invention, ſince Mention is made of the Founders of all of them; and if the World had had no Beginning, all Arts, eſpecially thoſe uſeful to Life, would have exiſted from all Time.

[p] To theſe Arguments it is ſaid, that the ſame Arts flouriſhed heretofore that do now; but ſometimes Fire deſtroyed Mankind, ſometimes Deluges ſwept them away, or Earthquakes ſwallowed them up; and hence it is that thoſe Arts ſeem to be New. *Lucretius* retorts this Anſwer by obſerving, that no Man of ſound Judgment will pretend that this World, whoſe Parts are ſometimes conſumed by Fire, ſometimes overwhelmed with Waters, and ſometimes ſhaken and ſwallowed up by Earthquakes, can be Eternal: For the Occaſion why we believe a Man to be Mortal is, becauſe he is ſubject to and attacked by thoſe Diſeaſes, which having ſeized upon others with greater Violence, have ſwept them away.

were

Sed periisse hominum torrenti sæcla vapore,
Aut cecidisse urbeis magno vexamine Mundi,
Aut ex imbribus assiduis exîsse rapaceis
Per terras Amneis, atque oppida cooperuisse:
Tantò quippe magis victus fateare necesse'st,
Exitium quoque Terraï, Cælique futurum.
Nam cùm res tantis morbis tantisque periclis
Tentarentur, ibi si tristior incubuisset
Causa; darent latè cladem, magnasque ruinas:
Nec ratione alia mortales esse videmur
Inter nos, nisi quòd morbis ægriscimus îsdem,
Atque illi, quos à vita natura removit.
Præterea, quæcunque manent æterna, necesse'st,
Aut quia sunt solido cum corpore, respuere ictus,
Nec penetrare pati sibi quicquam, quod queat arctas
Dissociare intus parteis, ut Materiaï
Corpora sunt, quorum naturam ostendimus antè:
Aut ideo durare ætatem posse per omnem.
Plagarum quia sunt expertia, sicut Inane'st,
Quod manet intactum, neq; ab ictu fungitur hilum:
Aut etiam, quia nulla loci sit copia circùm,
Quò quasi res possunt discedere, dissolvique.
Sicut Summarum Summa'st æterna, neque extra
Quis locus est, quò dissiliant: Neque corpora sunt, quæ
Possint incidere, & valida dissolvere plaga.
At neq; (uti docui) solido cum corpore Mundi
Natura'st, quoniam admistum'st in rebus Inane:
Nec tamen est ut Inane: neq; autem Corpora desunt,
Ex Infinito quæ possint fortè coorta
Proruere hanc rerum violento turbine Summam,
Aut aliam quamvis cladem importare pericli.
Nec porro natura loci, spatiumque profundi
Deficit,

were long before the ſame they are now; but that Mankind were deſtroyed by the Rage of Fire, or Cities were overwhelmed by Earthquakes (the great Terrors of the World) or that the rapid Rivers, by continual Showers, overflowed the Earth, and covered whole Towns; you have ſtill the more Reaſon to be convinc'd, and to allow, that the Earth and the Heavens will at laſt be deſtroyed: For if Things were liable to feel ſo great Convulſions, and ſuffer ſo great Dangers, it is plain if the Cauſe of theſe Ruins had been more violent, they muſt have periſhed and been utterly diſſolved. Nor have we any other Rule to judge that we ourſelves are Mortal, and muſt die, but that we ſicken with the ſame Diſeaſes as thoſe endured, whom Death has removed from this Life.

BESIDES, whatever is Eternal muſt be ſo, either becauſe it conſiſts of ſolid Seeds, or it cannot be broken by Blows; nor will it ſuffer any thing to pierce it, to diſunite the cloſe Contexture of its Parts; of this ſort are the Seeds of Matter, whoſe Nature we have ſhewn before; or Things would remain for ever, becauſe they are out of the Power of Stroke, as a *Void* is, which is not to be touched, nor can be affected by Force; or becauſe there is no Extent of Space about them, into which their Parts may fall when they are diſſolved. For this Reaſon the Univerſe, or All, is Eternal: There is no Place beyond, where its ſcattered Seeds may retire; nor are there any Bodies to beat upon it, and by violent Blows break it to Pieces. But (as I ſaid) the Subſtance of the World is not formed altogether of ſolid Seeds, becauſe a *Void* is mixed with its Parts; nor is it wholly *Void*; nor are there wanting Bodies, riſing to ſtrike and overthrow with mighty Force this World, or to bring it into Danger of Ruin ſome other way; nor is there any Defect of Place or Space beyond, into which

Deficit, exſpergi quo poſſint mœnia Mundi,
Aut alia quavis poſſint vi pulſa perire.
Haud igitur lethi præcluſa'ſt janua Cælo,
Nec Soli, Terræque, nec altis Æquoris undis:
Sed patet immani, & vaſto reſpectat hiatu.
Quare etiam Nativa neceſſum'ſt confiteare
Hæc eadem: neq; enim, mortali corpore quæ ſunt,
Ex infinito jam tempore adhuc potuiſſent
Immenſi validas ævi contemnere vireis.
Denique tantopere inter ſe cùm maxima Mundi
Pugnent membra, pio nequaquam concita bello;
Nonne vides aliquam longi certaminis ollis
Poſſe dari finem? Vel cùm Sol, & Vapor omnis
Omnibus epotis humoribus exſuperârint,
Quod facere intendunt, neque adhuc conata patrantur:
Tantum ſuppeditant Amnes, ultròque minantur
Omnia diluviare ex alto gurgite ponti;
Nequicquam: Quoniam verrentes æquora venti
Deminuunt, radiiſque retexens ætherius Sol;
Et ſiccare priùs confidunt omnia poſſe,
Quam liquor incæpti poſſit contingere finem.
Tantum ſpirantes æquo certamine bellum
Magnis de rebus inter ſe cernere certant:
Cùm ſemel in terra fuerit ſuperantior Ignis,
Et ſemel (ut fama'ſt) Humor regnârit in arvis.

Ignis

which the Walls of the World may tumble down, or they may fall to Pieces by ſome other Force, and be diſſolved. The Gate of Death therefore is not barred againſt the Heavens, nor the Sun, nor the Earth, nor the deep Waters of the Sea; but ſtands open, with its wide and gaping Jaws, to receive them all. For theſe Reaſons it muſt needs be allowed, that theſe Things had a Beginning; for whatever is formed of mortal Seeds, and muſt die, could not from Eternity reſiſt the ſtrong Attacks of infinite paſt Time, and the Power of Age.

LASTLY, [q] Since the Elements (the firſt Principles of the World) are continually fighting, and carrying on an implacable War among themſelves; can there be no End, think you, of their long Conteſts? If the Sun, ſuppoſe, or the Fire, by ſucking up all the Moiſture ſhould get the better, which they ſtrive to do, but have not yet effected their Deſign; ſuch a Supply of Water do the Rivers pour in, and the Sea from its mighty Deeps rather threatens to drown the World: But in vain; the bruſhing Winds are continually licking up and leſſening its Tide; and the hot Sun, with its Rays, drinks up a Part; and Things ſeem rather to be in Danger of being dried up, than of periſhing by a Flood of Waters. With ſuch equal Succeſs is the War carried on, and their Powers are ſo diſputed with equal Force. Yet Time was when the Rage of Fire once prevailed over the World; and the Water (as they

[q] He brings another Argument from the continual Fighting of the Elements, which are the Four chief Parts of the World: For (ſays he) ſince Fire engages with Water, and ſometimes the Flame, ſometimes the Flood, prevails; what ſhould hinder but that this Contention will at laſt end in the Deſtruction of the whole World? And that great Conflagrations and Deluges have happened, the Stories of *Phaeton* and *Deucalion*, well known, do ſufficiently evince.

Ignis enim ſuperavit, & ambens multa peruſſit,
Avia cùm Phaëthonta rapax vis Solis equorum
Æthere raptavit toto, terraſque per omneis.
At pater Omnipotens ira tum percitus acri
Magnanimum Phaëthonta repenti fulminis ictu
Deturbavit equis in terram; Solque cadenti
Obvius æternam ſuccepit lampada mundi;
Disjectoſque redegit equos, junxitque trementeis:
Inde ſuum per iter recreavit cuncta gubernans.
Scilicet, ut veteres Graiûm cecinere Poetæ:
Quod procul à veraſt animi ratione repulſum.
Ignis enim ſuperare poteſt, ubi Materiaï
Ex infinito ſunt corpora plura coorta;
Inde cadunt vires aliqua ratione revictæ,
Aut pereunt res exuſtæ torrentibus auris:
Humor item quondam cœpit ſuperare coortus,
Ut famaſt hominum, multas quando obruit urbeis:
Inde ubi vis aliqua ratione averſa receſſit,
Ex Infinito fuerat quæcunque coorta,
Conſtiterunt Imbres, & Flumina vim minuerunt.
Sed quibus ille modis conjectus Materiaï

Fundârit

ſay) once got the Dominion, and drowned the Earth. The Fire had the Victory, and ſet every thing in a Flame, when the mad Fury of the Horſes of the Sun, flying out of their Courſe, dragged the wretched *Phaeton* through the whole Heavens, and over all the Regions of the World; but great *Jupiter*, in his fierce Rage, ſuddenly ſtruck the daring Youth with a Thunderbolt, and tumbled him headlong from his Horſes to the Earth: And *Phœbus* meeting him as he fell, gathered up the ſcatter'd Rays of the Sun (the great Luminary of the World) brought back the diſtracted Horſes, and harneſſed them trembling to the Chariot again; and driving them in the right Courſe, recovered Things to their proper Order. This Tale the *Grecian* Poets ſung of old, which is abſurd and againſt all Belief; [r] yet the Fire may get the maſtery, if the large Supplies of fiery Seeds are brought from the great Maſs of Matter into this World. The Rage of theſe Seeds muſt by ſome Force be weakened and ſuppreſſed, or Things by ſo ſcorching Heats muſt periſh and be burnt up. The Water likewiſe prevailed once (as they ſay) when it overthrew many Cities; but when the Seeds, that were ſupplied from the Maſs of Matter, were turned into ſome other Channel, the Rains ceaſed, and the Rivers flowed again within their Banks.

The World may be burnt.

But now [s] I ſhall explicate in Order, by what Chance the violent Agitation of Matter produced the

How the World began.

[r] It is poſſible that Fire may deſtroy all Things, if an immenſe Quantity of Corpuſcles, of a fiery Matter, were brought down upon the Earth out of the Infinite Space; for in that Caſe, unleſs the Power and Force of that igneous Matter be weakned, repreſſed and kept under, by ſome means or other, all Things will be burnt, and periſh with too much Heat.

[s] In explaining how the World began, he excludes the Divine Providence from being concerned in it, and aſcribes the

Fundârit Cælum ac Terram, Pontique profunda,
Soliſque & Lunæ curſus, ex ordine ponam.
Nam certè neque conſilio Primordia rerum
Ordine ſe quæque, atque ſagaci mente locârunt;
Nec quos quæque darent motus pepigere profecto:
Sed quia multa modis multis Primordia rerum
Ex infinito jam tempore percita plagis,
Ponderibuſque ſuis conſuerunt concita ferri,
Omnimodiſque coire, atque omnia pertentare,
Quæcunque inter ſe poſſent congreſſa creare;
Propterea fit, uti magnum volgata per ævum
Omnigenos cœtus, & motus experiundo,
Tandem ea conveniant, quæ ut convenêre repente
Magnarum rerum fiant exordia ſæpe,
Terraï, Maris, & Cœli, generiſque Animantum.
Hic neque tum Solis rota cerni lumine largo
Altivolans poterat, neque magni Sidera mundi,
Nec Mare, nec Cœlum, nec denique Terra, neque Aër,
Nec ſimilis noſtris rebus res ulla videri:
Sed nova tempeſtas quædam, moleſque coorta.
Diffugere inde loci partes cœpere, pareſque
Cum paribus jungi res, & diſcludere Mundum,
Membraque dividere, & magnas diſponere parteis
Omnigenis è Principiis, diſcordia quorum

Intervalla,

he Heavens, and the Earth, and the Deeps of he Sea, and the Courſes of the Sun and Moon; or ſurely the Principles of Things could never fall into ſo regular a Diſpoſition by Counſel or Deſign, nor could they by Agreement reſolve what Motions they ſhould take among themſelves. But he Seeds of Things, being from Eternity beaten upon by outward Blows, or uſed to be driven by he Force of their own Weight, met every way, ried all Motions that might at laſt, by their uniting, end in the Production of Things; and then having attempted for infinite Time all ſorts of Union, and moved every way about, thoſe Seeds at length met and united, and became the Principles of the great Productions that followed, of the Earth, the Sea, the Heavens, and the whole Animal Creation.

BUT as yet there was no Chariot of the Sun to be ſeen, driving with his large Stock of Light through the Sky; no Sea, no Heavens, no Air, nothing like any Beings of this World of ours, to be ſeen; but a ſtrange Confuſion, a Maſs of rude and undigeſted Seeds. From this Heap the various Parts retired to their proper Place, and Seeds of like Nature joined together and formed this World. Then were its mighty Parts divided, and diſpoſed in Order, though produced from this confuſed Maſs, and from Seeds of every kind; for the diſagreeing Powers of thoſe Seeds ſo di-

Whole to Matter; from whence proceeded *Chaos* (a rude and indigeſted Heap of Particles) which being driven to and fro, at length came together, like with like; and thence aroſe the Heaven, the Earth, *&c.* He obſerves, that ſo long as the Atoms were jumbled confuſedly one among another, neither Earth, nor Heaven, nor Stars, had yet a Being; but when the chief Parts of the World began to disjoin, and get clear from each other, then the Heaven ſhone with Splendor, the dry Ground appeared, the Waters were gathered into One, *&c.*

Intervalla, Vias, Connexus, Pondera, Plagas,
Concursus, Motus turbabat, prælia miscens,
Propter dissimileis formas variasque figuras;
Quòd non omnia sic poterant conjuncta manere,
Nec motus inter sese dare convenienteis:
Hoc est à Terris altum secernere Cœlum,
Et seorsum Mare uti secreto humore pateret,
Seorsus item puri, secretique ætheris Ignes.
Quippe etenim primum Terraï corpore quæque,
Propterea quod erant gravia, & perplexa coibant,

ſturbed their ſeveral Courſes, Intervals, Conections, Weights, Strokes, Unions and Motions, and kept them ſo continually at War, that they could never all unite, nor agree upon any regular Motions among themſelves. Thus the Heavens ſeparated, and raiſed their Bodies on high above the Earth; and the Sea, with its vaſt Extent of collected Waters, retired apart; and the pure and bright Fires of the Sky flew upwards, and divided from the reſt.

How the Earth was made.

And firſt, [t] The Particles of the Earth, being heavy and entangled, met and ſunk downwards towards

[t] It was the Opinion of *Epicurus*, that the Atoms, being embroiled and confuſed in a Heap together, did by their innate Motion roul and tumble up and down among one another, till at length all the more denſe Atoms jumbled towards the Middle, and all the more Rare, being extruded and ſqueezed away by the Thicker, flew towards the Circumference: That of theſe thicker Atoms the Body of the Earth was compacted, and that it contained within its Bulk ſome Seeds of Water, which had not been able to diſentangle themſelves and get away at the ſame time with the others; but that ſome of thoſe that had diſentangled themſelves, did by reaſon of their various Degrees of Tenuity retire to ſeveral Diſtances; thus ſome of them ſtopt not far from the Maſs of Earth, and made the Air; that others mounted yet more aloft, and compoſed the Sky; and that the fiery Corpuſcles that were extruded with the reſt, getting clear of all of them, combined into thoſe Bodies that ſhine in the Sky, and are called *Stars:* Laſtly, That the leſſer, round, ſmooth Corpuſcles, were ſo determined, limited, and confined to that Motion towards the Circumference that was made by *Eliſion* (or, by Expreſſion, from the more denſe Corpuſcles) that foraſmuch as they went not out of the Maſs by parallel Ways, they did in the very Progreſſion variouſly encounter one another, and mutually repelled the Violence they received; which Violence at length ceaſing, thoſe that were got fartheſt or moſt remote from the Center, became entangled one with another, and mutually compreſſing each other, and holding faſt together, did by that means create a certain Species of the Walls of the World; and whatever Corpuſcles came to them there, were turned back und repreſſed from them in ſuch a manner, that ſtill new Supplies coming up, the whole etherial or celeſtial Re-

In medioque imas capiebant omnia ſedes :
Quæ quantò magis inter ſe perplexa coibant,
Tam magis expreſſere ea, quæ Mare, Sidera, Solem,
Lunamque efficerent, & magni mœnia Mundi.
Omnia enim magis hæc è lævibus atque rotundis
Seminibus, multòque minoribu' ſunt Elementis,
Quàm Tellus : ideo per rara foramina terræ
Partibus erumpens primus ſe ſuſtulit Æther
Signifer, & multos ſecum levis abſtulit Igneis :
Non alia longè ratione, ac ſæpe videmus,
Aurea cùm primùm gemmanteis rore per herbas
Matutina rubent radiati lumina Solis,
Exhalantque Lacus nebulam, Fluviique perennes :
Ipſa quoque interdum Tellus fumare videtur :
Omnia quæ ſurſum cùm conciliantur in alto,
Corpore concreto ſubtexunt nubila Cælum :
Sic igitur tum ſe levis, ac diffuſilis Æther
Corpore concreto circumdatus undique ſepſit,
Et latè diffuſus in omneis undique parteis,
Omnia ſic avido complexu cætera ſepſit.
Hunc exordia ſunt Solis Lunæque ſecuta :
Inter utroſque globi quorum vertuntur in auris :

Quæ

towards the middle Place of the Mafs; and the more clofely twined the Parts of it were, the more they fqueezed out thofe Seeds that compofed the Sea, the Stars, the Sun; and that formed the Moon, and the Heavens (the Walls of this great World): For Thefe confift of Seeds much more fmooth and round, and of much lefs Principles than the Earth; and therefore the Heavens (the Abode of the Stars) firft got free through the fubtle Pores of the Earth, and afcended upwards; and being light, drew many Seeds of Fire along with them; much in the fame manner with what we frequently obferve, when the golden Rays of the bright Morning Sun firft fhine upon the Grafs decked with pearly Dew, and the ftanding Lakes and running Rivers exhale a Mift into the Air, and the Earth fometimes feems to fmoke. Thefe Vapours, when they are raifed upwards and united, become Clouds, and with their condenfed Bodies darken the whole Sky; and fo the light and fpreading *Æther*, being condenfed, ftretches widely over every Place; and being diffufed on all Sides abroad, embraces every thing with its large Circumference, and incloſes it about.

The Formation of the Heavens.

THE Beginnings of the [u] Sun and Moon follow next, whofe Orbs are rolled in the Air between

gion was aptly made and fabricated by them. This is done (as *Lucretius* obferves) in the fame manner as when Vapours and Exhalations fteam out of the Earth and Water; and being carried aloft, are there condenfed and grow into one Body of Clouds, fo as to make as it were a Ceiling, under which the Air that remains vifible to us is contained.

[u] Having made the Earth as the Foundation of the World, and the Sky the Walls of it (as he calls it) he now places the Sun and Moon, which are of a middle Nature, between the Sky and the Air (as being compofed of Principles lighter than thofe of the Air, and heavier than thofe of the Sky) in the very Confines of the Air and Sky; where (he tells us) they are in perpetual Motion, as the Lungs and Heart in Animals.

the

Quæ neque Terra ſibi adſcivit neque maximus Æther:
Quod nec tam fuerint gravia, ut depreſſa ſederent:
Nec levia, ut poſſent per ſummas labier oras:
Et tamen inter utroſque ita ſunt, ut corpora viva
Verſent, & partes ut Mundi totius extent.
Quod genus in nobis quædam licet in ſtatione
Membra manere, tamen cum ſint ea quæ moveantur.
His igitur rebus retractis, Terra repente,
Maxima, quà nunc ſe Ponti plaga cærula tendit,
Succidit, & ſalſo ſuffudit gurgite foſſas:
Inque dies quantò circum magis Ætheris æſtus,
Et radii Solis cogebant undique Terram,
Verberibus crebris extrema ad limina apertam,
In medio ut propulſa ſuo condenſa coiret:
Tam magis expreſſus ſalſus de corpore Sudor
Augebat Mare manando, campoſque natanteis:
Et tantò magis illa foras elapſa volabant
Corpora multa Vaporis, & Aëris, altaque Cæli
Denſebant procul à terris fulgentia templa:
Sidebant Campi, creſcebant Montibus altis
Aſcenſus: neque enim poterant ſubſidere Saxa,
Nec pariter tantundem omnes ſuccumbere partes.
Sic igitur Terræ concreto corpore pondus

Conſtitit,

the *Æther* and the Earth, and whoſe Principles would unite neither with thoſe of the Earth nor the Sky; they had not Weight enough to ſink ſo low as the one, nor were they ſufficiently light to riſe ſo high as the other; yet they are ſo placed between both, that they conſtantly turn about their Bodies, and ſo become Parts of the whole World. As in theſe Bodies of Ours, ſome Members are continually at Reſt, when others are always in Motion.

THESE Things being ſeparated, [x] a great Part of the Earth ſunk ſuddenly, and made a Channel where the Tides of the Sea now flow, and formed a Cavern for the ſalt Waters: And the more the Heat of the Sky, and the Beams of the Sun, preſſed every way with frequent Strokes upon the Earth, full of Pores on the Outſide (that ſo its Particles, being driven towards the Middle, might be more firm and condenſed) the more the ſalt Water like Sweat was ſqueezed out, and by flowing inlarged the Surface of the Sea, and ſpread wider abroad; and the more the many Corpuſcles of Fire and Air diſentangled themſelves, and flew off from the Earth, and formed themſelves above, at a great Diſtance, into the ſhining Frame of the Heavens. The Valleys ſubſided, the Mountains raiſed their lofty Heads; nor could the Rocks ſink down, nor all Parts of the Earth fall equally low. And thus the Weight of the Earth, with its

[x] That feculent Maſs that ſunk together to the Bottom, being preſſed on all Sides by the Beams of the Sun and the Heat of the Sky, contracted itſelf; thence exhaled the Sea like Sweat; but the lighter Particles mounting higher, compoſed the Elements of Fire and Air; and ſome of the Particles of this Maſs, being more hard and ſtiff than the others, they did not all ſubſide alike; and hence came the hollow Places to receive the Sea, and the Channels for the Rivers; and hence too the Level of the Plains, and the Turgidneſs of the Mountains.

heavy

Conſtitit, atque omnis Mundi quaſi Limus in imum
Confluxit gravis, & ſubſedit funditus, ut Fæx.
Inde Mare, inde Aër, inde Æther igniſer ipſe.
Corporibus liquidis ſunt omnia pura relicta;
Et leviora aliis alia: & liquidiſſimus Æther,
Atque leviſſimus Aërias ſuper influit auras;
Nec liquidum corpus turbantibus Aëris auris
Commiſcet: ſinit hæc violentis omnia verti
Turbinibus: ſinit incertis turbare procellis:
Ipſe ſuos Igneis certo fert impete labens.
Nam modicè fluere, atque uno poſſe Æthera niſu,
Significat Ponti Mare, certo quod fluit æſtu,
Unum labendi conſervans uſque tenorem.
Motibus Aſtrorum nunc quæ ſit cauſa, canamus.
Principiò, magnus Cœli ſi vertitur orbis:
Ex utraque Polum parti premere Aëra nobis
Dicendum'ſt, extraque tenere, & claudere utrinque;
Inde Alium ſupera fluere, atque intendere eôdem,

heavy Body, ſtood firm; and its whole Maſs, like thick Mud, fell to the Bottom, and ſunk the loweſt, as the Dregs of all.

AND thus were produced the Sea, the Air, and the [y] Sky (or the *Æther*) ſpangled with Stars. All the finer Seeds went to the Formation of theſe fluid Bodies, but ſome were more light than others; and the moſt light and liquid *Æther* mounted higher, and ſpread over the Body of the Air; but its liquid Parts never mix with the turbulent Blaſts of the Air below it. The airy Region is tormented by violent Whirlwinds, and diſturbed by uncertain Storms; while the *Æther* calmly glides, and bears along its Fires in a fixed Courſe; and that the *Æther* may flow thus gently, and in a regular Motion, we have an Inſtance in the *Euxine* Sea, that runs with one certain Tide, and preſerves one conſtant Stream in the Current of its Waters.

Why the Stars move.

NOW let us ſhew from what Cauſe proceeds [z] the Motion of the Stars: And firſt, If the whole Orb of the Heavens be moved, then we muſt allow, that the Air bounds and incloſes the outward Surface of the Heavens, and both the Poles; the upper Part of this Air preſſes above, and drives the Skies down to the Weſt, the Courſe in which

[y] The reſplendent and liquid *Æther*, having mounted higher than the inconſtant and turbulent Air, is wholly undiſturbed by Storms, and rolls in a conſtant and like Motion; which Motion of the *Æther* is not in the leaſt incredible, ſince the *Euxine* Sea does the like, and is continually flowing into the *Propontick*, without changing its Courſe.

[z] If the whole Orb be moved, then there may be two Airs; one that may preſs from above, and drive it down to the Weſt, and another that may be ſaid to bear and lift it up from beneath. If the Orb be without Motion, then ſome rapid Particles of the Sky, ſtruggling to get into the empty Space, and not able to force their way and break through the ſtrong Walls of the World, are whirled about, and drag the Stars with them, *&c.*

the

Quo volvenda micant æterni Sidera mundi:
Aſt Alium ſubter, contrà qui ſubvehat Orbem:
Ut fluvios verſare Rotas, atque Hauſtra videmus.
Eſt etiam quoque, uti poſſit Cælum omne manere
In ſtatione, tamen cùm lucida ſigna ferantur:
Sive quod incluſi rapidi ſunt Ætheris æſtus,
Quærenteſque viam circumverſantur, & Ignes
Paſſim per Cæli volvunt ſe immania templa:
Sive aliunde fluens alicunde extrinſecus Aër
Verſat agens igneis: ſive Ipſi ſerpere poſſunt,
Quo cujuſque cibus vocat, atque invitat eunteis;
Flammea per cælum paſcenteis corpora paſſim.
Nam quid in hoc Mundo ſit eorum, ponere certum
Difficile'ſt: ſed quid poſſit, fiatque per Omne
In variis Mundis varia ratione creatis,
Id doceo: plureiſque ſequor diſponere cauſas
Motibus aſtrorum, quæ poſſint eſſe per Omne.
E quibus una tamen ſit & hæc quoque cauſa neceſſe'ſt,
Quæ vegeat motum ſignis: ſed quæ ſit earum
Præcipere, haud quaquam'ſt pedetentim progredientis,
Terraq; ut in media Mundi regione quieſcat,
Evaneſcere paullatim, & decreſcere pondus
Convenit: atque aliam naturam ſubter habere
Ex ineunte ævo conjunctam, atque unitèr aptam
Partibus Aëriis Mundi, quibus inſita ſidit.

Propterea

the Stars (the great Lights of the World) are to move; the under Part flows below, and lifts up this Orb from beneath, and makes it riſe, as we ſee the Wheels of a Mill, or Buckets, are turned about by a running Stream.

OR perhaps the whole Body of the Heavens may remain fixed, and yet the Stars may execute their Motions; either becauſe ſome rapid Particles of the Sky are ſhut up, and ſtruggling to find a Way into the empty Space, are whirled about, and drag the Stars along with them; or ſome external Air, ruſhing in from ſome other Place, may turn them about; or they may move ſeverally forward of themſelves through the Sky, where proper Nouriſhment invites them to feed and keep alive their Fires. But it is hard to reſolve for certain, what is the particular Cauſe of theſe Motions in this World of ours. I rather propoſe Reaſons in general for what may be done through the Univerſe, in the Multitude of Worlds contained in the Great *All*, and formed after various Manners; and I offer many Cauſes that may account for the Whole, yet One only can be the True One that produced theſe Effects; but to pronounce which it is, no wary Philoſopher will take upon him to do.

Why the Earth doth not fall.

BUT that the Earth ſhould reſt in the middle Region of the World, it is neceſſary that its Weight ſhould in ſome Degree leſſen and be laid aſide; and for this End it was fit that another Subſtance ſhould be placed under it, to which from the very Beginning it ſhould be united cloſely by natural and [a] congeneal Ties, and upon which it

[a] Though the Air only is circumfuſed around the Earth, yet becauſe both Air and Earth are bound by natural and kindred Ties, and from their very Beginning are Parts of the ſame Whole, the Earth is no Burden to the Air; but having in a manner laid aſide all its Weight and Compreſſion, it only ſticks faſt and cleaves naturally to it.

ſhould

Propterea non est oneri, neque deprimit auras:
Et sua cuique Homini nullo sunt pondere Membra:
Nec Caput est oneri Collo, nec denique totum
Corporis in Pedibus pondus sentimus inesse.
At quæcunque foris veniunt impôstaque nobis
Pondera sunt, lædunt permultò sæpe minora:
Usqueadeo magni refert, cui quæ adjaceat res.
Sic igitur Tellus non est aliena repente
Adlata, atque auris aliunde objecta alienis:
Sed pariter prima concepta ab origine Mundi:
Certaque pars ejus, quasi nobis Membra videtur.
Præterea grandi tonitru concussa repente
Terra, supra se quæ sunt, concutit omnia motu:
Quod facere haud ulla posset ratione, nisi esset
Partibus aëriis mundi, cæloque revincta.
Nam communibus inter se radicibus hærent
Ex ineunte ævo conjuncta, atque uniter apta.
Nonne vides etiam, quàm magno pondere nobis
Sustineat corpus tenuissima vis Animai,
Propterea quia tam conjuncta, atque uniter apta'st?
Denique jam saltu pernici tollere Corpus
Quis potis est, nisi vis Animæ, quæ membra gubernat?
Jamne vides quantùm tenuis natura valere
Possit, ubi est conjuncta gravi cum corpore, ut Aër
Conjunctus terris, & nobis est Animi vis?

Nec

ſhould be ſtaid. This Subſtance being the ſurrounding Air, which is a Part of the ſame Whole, and as it were of a Piece with the Earth, the Earth therefore hangs ſuſpended in the Middle, and is no Weight or Preſſure to the Air at all; and ſo the Limbs are no Load to the Body of a Man, nor is the Head a Burden to the Neck, nor do we perceive the Weight of the whole Body to preſs heavy upon the Feet; but whatever Weight is laid upon us from without, and is no Part of us, is a Pain to us, though it be ever ſo ſmall. Of ſo great Concern it is to what every Being is ſeverally united. For the Earth was not brought from any other Place, and then thruſt into the ſtrange Embrace of a different Air, but was formed together with it, and became a regular Part of the World; as our Limbs were produced with the Body, and are eſſential Parts of it.

Besides, the Earth, when it is ſhaken of a ſudden by a violent Thunder, makes every thing that is upon it to tremble; which it could by no means do, unleſs it was cloſely joined to the airy Parts of the World, and to the Heavens above; for they all ſtick cloſely together by common Bonds, and kindly unite from the very Beginning. Don't you obſerve how the moſt ſubtle Power of the Soul ſupports the Body with all its Weight, becauſe it is ſo ſtrictly connected and ſo cloſely joined to it? And what is it but the Force of the Soul which actuates the Limbs that raiſes the Body, and makes it leap nimbly from the Ground? Don't you perceive now what a Subſtance of the moſt ſubtle Nature is able to do, when united with a heavy Body; ſuch as the Air when it is joined to the Earth, and as the Soul to this Body of ours?

Nec nimio Solis major rota, nec minor ardor
Esse potest, nostris quàm sensibus esse videtur.
Nam quibus è spatiis cunque Ignes lumina possunt
Adjicere, & calidum membris adflare vaporem,
Illa ipsa intervalla nihil de corpore limant
Flammarum, nihilo ad speciem'st contractior Ignis.
Proinde calor quoniam Solis, lumenque profusum
Perveniunt nostros ad sensus, & loca tingunt:
Forma quoque hinc Solis debet filumque videri,
Nil adeo ut possis plùs, aut minùs addere verè.
Lunaque sive notho fertur loca lumine lustrans,
Sive suam proprio jactat de corpore lucem,
Quicquid id est, nihilò fertur majore figura,
Quàm, nostris oculis quam cernimus, esse videtur.
Nam priùs omnia, quæ longè remmota tuemur
Aëra per multum specie confusa videntur,
Quam minimum filum: quapropter Luna necesse'st,
Quandoquidem claram speciem, certamque figuram
Præbet, ut est oris extremis cunque notata,
Quanta hæc cunq; fuat, tanta hinc videatur in alto.
Postremò, quoscunque vides hinc ætheris Igneis,
(Quandoquidem, quoscunque in terris cernimus igneis.
Dum tremor est clarus, dum cernitur ardor eorum;

Perparvum

But further; [b] The Orb of the Sun is not much larger, nor is its Heat much greater, than what our Senſes diſcover to us; for at whatever Diſtance the Fire can ſend out its Rays of Light, and warm us with its Heat, that Diſtance takes away nothing from the Bigneſs of the Flame, nor does the Fire appear leſs contracted to the Eye. And therefore, ſince the Heat of the Sun, and his diffuſed Light, do reach our Senſes, and ſhine upon the Earth, you are to conclude, that his Form and Magnitude are no greater nor leſs than they appear to be.

And the Moon, whether ſhe views the World with borrowed Light, or whether ſhe ſhoots out her Beams from her own Body; however it be, ſhe is of no greater Size than to our Senſe ſhe appears: For all Objects we look upon at a great Diſtance, and through a long Tract of Air, ſhew firſt irregular and confuſed, before we diſcover their utmoſt Figure and Proportion. And therefore, ſince the Moon at once preſents to us the certain Form, and the complete Appearance of her whole Orb, ſhe ſhews to us above as great as ſhe really is.

Besides, ſince all our Fires here below, when they are ſeen at a great Diſtance, ſo long as their Light is clear, and their Brightneſs ſhines out to

[b] The Magnitude of the Sun, Moon and Stars, is the ſame as it appears to be: For (ſays he) as we retire from any Fire, ſo long as we are within ſuch a Diſtance of it that we can perceive its Light and Heat, the Fire ſeems no leſs than it does when we are near it; but we feel the Heat, and perceive the Light of the Sun; therefore the Sun is of the ſame Magnitude it ſeems to be. And then, we diſtinctly ſee the utmoſt Verge and Face of the Moon; yet we ſhould ſee it but confuſedly, if we were ſo far off that its Diſtance took away any of its Magnitude. And, laſtly, the Stars are much of the ſame Magnitude they appear; for even the Fires that we ſee here below, at a Diſtance from one another, either by Day or by Night, preſent to our Eyes the like Variety of Sizes.

Perparvum quiddam interdum mutare videntur
Alterutram in partem ſilum, cùm longiùs abſint,)
Scire licet, perquàm pauxillo poſſe minores
Eſſe, vel exigua majores parte, brevique.
Illud item non eſt mirandum, qua ratione
Tantulus ille queat tantum Sol mittere lumen,
Quod maria, ac terras omneis cœlumque rigando
Compleat, & calido perfundat cuncta vapore.
Nam licet hinc Mundi patefactum totius unum
Largifluum fontem ſcatere, atque erumpere flumen
Ex omni Mundo, quò ſic Elementa vaporis
Undique conveniunt, & ſic conjectus eorum
Confluit, ex uno capite hic ut profluat ardor;
Nonne vides etiam, quàm latè parvus aquaï
Prata riget Fons interdum, campiſque redundet?
Eſt etiam quoque, uti non magno Solis ab igni
Aëra percipiat calidis fervoribus ardor.
Opportunus ita'ſt ſi fortè, & idoneus Aër,
Ut queat accendi parvis ardoribus ictus:
Quod genus interdum ſegetes ſtipulamque videmus
Accipere ex una ſcintilla incendia paſſim,
Forſitan & roſea Sol altè lampade lucens
Poſſideat multum cæcis fervoribus ignem
Circum ſe, nullo qui ſit fulgore notatus,
Æſtiferum ut tantùm radiorum exaugeat ictum.
Nec ratio Solis ſimplex, nec certa pateſcit,

Quo

us, do ſeem to change a little, and ſhew more or leſs contracted; we may conclude, that the Stars we view in the Heavens, are very little either greater or leſs than they appear.

NOR are we to wonder how it comes to paſs, that ſo ſmall a Body as the Sun, is able to emit ſo much Light as to ſpread over the Seas, the whole Earth and the Heavens, and to cheriſh all Things with its kindly Heat: For you may imagine, that from the Sun one large Fountain of Light breaks out, and flows abundantly, like a River, over the whole World; and that the Seeds of Fire from all Parts of the Univerſe meet in the Body of the Sun, and are there collected as into a Spring, from whence the Heat of the whole World is diffuſed abroad. Don't you obſerve how widely a ſmall Fountain of Water ſpreads its Stream over the Meadows, and overflows the Fields?

OR perhaps [c] the Heat flowing from the ſmall Body of the Sun, may inflame the adjacent Air, if the Air be properly tempered and diſpoſed to catch the Fire from the feeble Strokes of Heat; as we ſometimes ſee the Corn and the Stubble to be ſet all in a Blaze from one ſmall Spark falling upon it; or it may be the Sun, ſhining above with roſy Light, has many dark and unſeen Stores of Fire about it, which, though diſtinguiſhed by no outward Brightneſs, may yet increaſe the Heat of its Rays, and make their Strokes the more inflamed.

NOR can [d] one certain Reaſon be aſſigned, why the Sun declines from its Summer Height, and bends

[c] Perhaps the Air near the Sun is ſet on Fire by its Beams, and that many fiery Particles, inviſible to us, are hovering about his Orb; and thence may proceed ſo great a Profuſion of Light and Heat.

[d] He propoſes the Opinion of *Democritus*, who taught that the lower Spheres are rolled and whirled around by the higheſt

Quo pacto æstivis è partibus Ægocerotis
Brumaleis adeat flexus, atque inde revertens
Canceris ut vertat metas se ad Solstitialeis:
Lunaque mensibus id spatium videatur obire,
Annua Sol in quo consumit tempora cursu:
Non, inquam, simplex his rebus reddita causa'st.
Nam fieri vel cum primis id posse videtur,
Democriti quod sancta viri sententia ponit:
Quantò quæque magis sint terram Sidera propter,
Tantò posse minùs cum cæli turbine ferri.
Evanescere enim rapidas illius, & acreis
Imminui subter vireis, ideoque relinqui
Paullatim Solem cum posterioribu' Signis,
Inferior multò quòd sit, quàm fervida Signa:
Et magis hoc Lunam: & quantò demissior ejus
Cursus abest procul à Cælo, terrisque propinquat,
Tantò posse minùs cum Signis tendere cursum.
Flaccidiore etiam quantò jam turbine fertur
Inferior quàm Sol, tantò magis omnia Signa.
Hanc adipiscuntur, circum, præterque feruntur.
Propterea fit, ut Hæc ad Signum quodque reverti
Mobiliùs videatur, ad Hanc quia Signa revisunt.
Fit quoque ut è mundi transversis partibus Aër
Alternis certo fluere alter tempore possit,

bends his Winter Course towards the Tropick of *Capricorn*, and then returning, reaches the Tropick of *Cancer*, and makes the Summer Solstice; and that the Moon in every Month finishes the same Course through the Twelve Signs, as the Sun takes up a whole Year in running through: I say, one certain Reason cannot be assigned for these Events; for perhaps the Cause may be what the venerable Opinion of that Great Man *Democritus* has laid down, that the nearer the Stars are to the Earth, they are carried more slowly about by the general Motion of the Heavens. For the rapid Force and Celerity of the upper Sky, are much lessened before they reach the inferior Orbs; and therefore the Sun, with the lower Signs that follow it, is in some measure left, because it is much lower than the high Region of the Stars: And the Moon is much lower still; and the greater Distance from the Heavens she observes in her Course, and the nearer she approaches the Earth, the less is she capable of keeping Pace with the Motions of the Signs, and the slower she is in her Motion than the Sun as she moves below him; and the Signs may the more easily overtake her, and pass about and beyond her the oftner: And therefore the Moon seems the sooner to run through all the Signs, when in reality the Signs return to her.

Or perhaps [e] two several Airs may at certain Seasons blow from the opposite Parts of the World by

Orb, called the *Primum Mobile*, either swifter or more slow, according to the Distance of each Sphere from that highest Orb. Thus the Sun moves swifter than the Moon, because the Sun is higher, and therefore the Signs more seldom overtake and pass by him than they do by her; nor is it then strange, that the Moon runs through all the Signs in one Month, which the Sun goes through but in twelve.

[e] He introduces two several Airs waiting on the Sun and Moon; by one of which they are shoved down from *Cancer*

Qui queat æstivis Solem detrudere Signis
Brumaleis usque ad flexus, gelidumque rigorem:
Et qui rejiciat gelidis à Frigoris umbris
Æstiferas usque in parteis, & fervida Signa.
Et ratione pari Lunam, Stellasque putandum'st,
Quæ volvunt magnos in magnis orbibus annos,
Aëribus posse alternis à partibus ire.
Nonne vides etiam diversis nubila ventis
Diversas ire in parteis, inferna supernis?
Quî minùs illa queant per magnos ætheris orbeis
Æstibus inter se diversis Sidera ferri?
At nox obruit ingenti caligine terras,
Aut ubi de longo cursu Sol extima cæli
Impulit, atque suos efflavit languidus igneis
Concussos itere, & labefactos aëre multo:
Aut quia sub terras cursum convertere cogit
Vis eadem, supera terras quæ pertulit orbem.
Tempore item certo roseam Matuta per oras
Ætheris Auroram defert, & lumina pandit,
Aut quia Sol idem sub terras ille revertens

by turns; the one may drive the Sun down from the Summer Signs into his Winter Courſe, and the Extremity of Cold; the other may raiſe it from the cold Winter Signs into the Summer Solſtice. And for the ſame Reaſon the Moon and the Stars, which fulfil their Periods and Revolutions in their long Courſes, may be forced upwards and downwards in the Heavens, by two ſeveral Streams of Air likewiſe. Don't you obſerve the Clouds, driven by contrary Winds, move different Ways, the lower oppoſite to thoſe above? What then ſhould hinder that the Stars ſhould not be carried on, by contrary Blaſts of Air, through the great Circles of the Sky?

AND [f] the Night, we imagine, covers the Earth with thick Darkneſs, either becauſe the Sun in his long Courſe has reached the Extremity of the Heavens, and being tired, has blown out his Fire ſcattered by the Swiftneſs of his Motion, and decayed by the Tract of Air he paſſed through; or the ſame Force that raiſed his Orb, and drove it round above, compels him to change his Courſe, and roll beneath the Earth.

AND [g] *Matuta*, the Goddeſs of the Morning, at a fixed Time leads *Aurora* bluſhing through the Regions of the Sky, and opens the Day, either becauſe the Sun, returning from under the Earth,

to *Capricorn*, and by the other heaved up again from *Capricorn* to *Cancer*, and this at fixed and certain Times: And that it may not ſeem incredible, he bids us look on the different Racks of Clouds which the Winds drive ſeveral Ways.

[f] The Night (he ſays) ſucceeds the Day, either becauſe the Sun, being fatigued with the Length of his Journey, is extinguiſhed; or becauſe he is whirled with the ſame Force beneath the Earth by Night, as above the Earth by Day.

[g] The Splendor which we call the Morning, and which before the Riſing of the Sun adorns the Heavens, is occaſioned becauſe the Sun, returning from Weſt to Eaſt, pours forth his Rays before he appears himſelf, or becauſe the Seeds of Fire, *&c.*

attempts

Anticipat cœlum radiis accendere tentans:
Aut quia conveniunt ignes, & semina multa
Confluere ardoris consuerunt tempore certo,
Quæ faciunt Solis nova semper lumina gigni.
Quod genus Idæis fama'st è montibus altis
Dispersos igneis orienti lumine cerni:
Inde coire globum quasi in unum, & conficere orbem.
Nec tamen illud in his rebus mirabile debet
Esse, quòd hæc Ignis tam certo tempore possint
Semina confluere, & Solis reparare nitorem.
Multa videmus enim, certo quæ tempore fiunt
Omnibus in rebus, floreſcunt tempore certo
Arbusta, & certo dimittunt tempore florem.
Nec minùs in certo dentcis cadere imperat ætas
Tempore, & impubem molli pubescere veste,
Et pariter mollem malis demittere barbam.
Fulmina postremo, Nix, Imbres, Nubila, Venti,
Non nimis incertis fiunt in partibus anni.
Namque ubi sic fuerunt causarum exordia prima,
Atque uti res mundi cecidere ab origine prima,
Consequa natura'st jam rerum ex ordine certo.
Crescere itemq; Dies licet, & tabescere Noctcis,
Et minui Luces, cùm sumant augmina Noctes:

Aut

attempts to inlighten the World with his Rays, before he appears himſelf; or becauſe the Seeds of Fire that were diſperſed abroad in his Journey the Day before, flow together in the Eaſtern Sky, and illuſtrate the Earth with a faint Light, before they have kindled up anew the Globe of the Sun. This (they ſay) is eaſily diſcovered from the Top of Mount *Ida*; where, upon the Riſing of the Sun, we firſt diſcover his ſcattered Rays, which are afterwards contracted into one Orb, and make up one Ball of Light.

NOR are you to wonder that theſe Seeds of Fire ſhould flow together conſtantly every Day, and repair the Splendor of the Sun; for we obſerve many Things in Nature that act regularly, and at a fixed Time. The Trees look green at a certain Seaſon, and at a certain Seaſon caſt their Leaves; Children at a certain Time ſhed their Teeth; and the Boy grows ripe at a certain Time, and ſhews the ſoft Down upon his Cheeks. And laſtly, The Thunder, the Snow, the Rains, the Clouds, the Winds, are no leſs certain, and fall out in fixed Seaſons of the Year; for the Courſe which Things obſerved from the Beginning of the World, they perſue the ſame, and continue ſtill to act in the ſame certain Order.

THE [h] Days likewiſe increaſe, and the Nights grow ſhorter; and the Nights increaſe, and the Days

[h] It is impoſſible in this Place to explain the whole Syſtem of the celeſtial Globe. The Meaning of the Words *Æquator*, *Æquinox*, *Tropicks*, *Zodiack*, &c. is to be found in every Dictionary. It may be proper only to obſerve here, that the Poet offers three Reaſons for the Length and Shortneſs of the Days and Nights: The firſt, becauſe the Sun makes his Rounds above and below the Earth more ſwiftly at ſome Times than at others; and here he deſcribes the unequal Segments of the diurnal and nocturnal Circles in the oblique Poſition of the Sphere; but from this Rule he excepts the *Æquator*, which in every Obliquity is divided from the *Horizon*

Aut quia Sol idem sub terras, atque superne,
Imparibus currens anfractibus ætheris oras
Partit: Et in parteis non æquas dividit orbem:
Et quod ad alterutra detraxit parte, reponit
Ejus in adversa tantò plus parte relatus,
Donicum ad id signum cœli pervénit, ubi anni
Nodus nocturnas exæquat lucibus umbras.
Nam medio cursu flatus Aquilonis, & Austri,
Distinet æquato cælum discrimine metas,
Propter Signiferi posituram totius orbis;
Annua Sol in quo contundit tempora serpens,

Obliquo

Days ſhorten; either becauſe the Sun, in his Courſe above and below the Earth, moves obliquely in unequal Lines, and divides the Heavens into unequal Parts; and what he takes off from one Part of the Heavens, he adds ſo much to the oppoſite Part again, till he arrives at that Sign in the Heavens, where he cuts the [i] *Æquinoctial* Line, and makes equal Day and Night; for this Line is equally diſtant from the the two [k] Tropicks, which are the Bounds of the Sun's Motion towards the North and South; and this is owing to the Obliquity of the [l] *Zodiack*, through which the Sun

Horizon into two equal Parts. And this is the Reaſon that the Sun, being twice within the Year placed in the *Æquator*, makes two *Æquinoxes* in all Countries whatever: This is the true Reaſon; for the Inequality of the Days and Nights proceeds from the oblique Poſition and Site of the *Zodiack*; whence it comes to paſs that they who have a perpetual *Æquinox*, that is, thoſe that live under the *Æquator*, never have the leaſt Inequality, but a conſtant Equality, of Days and Nights, becauſe they inhabit under a ſtraight and direct Sphere; but thoſe that live towards either of the Poles, have their Days and Nights longer or ſhorter, according as they are more remote from the Pole, or nearer advanced to it; but ſuch as live in the moſt oblique Sphere, that is, under either of the Poles, have ſix Months of continual Light, and by turns as many of continual Night and Darkneſs.

[i] This is one of the greateſt Circles of the Sphere; its Poles are the ſame with the Poles of the World, from either of which it is equally diſtant, and divides the celeſtial Globe into the northern and ſouthern *Hemiſphere*.

[k] The Tropicks of *Cancer* and *Capricorn* are the utmoſt Bounds of the Sun's Revolution. They are called Tropicks from the *Greek* Τροπὴ, which ſignifies *Converſion* or *Turning*; becauſe the Sun, when he comes at thoſe Circles, turns back again towards the *Æquator*, nor ever goes beyond thoſe Bounds, either towards the North or South.

[l] The *Zodiack* is a Circle, or *Zone*, obliquely paſſing from Eaſt to Weſt, before the *Equinoctial* and *Solſtitial* Points, and parted in the midſt by the *Ecliptick*, which divides it into two Parts; the one Northern, the other Southern. It is ſaid to be oblique, becauſe it is not an equal Diſtance from each Pole; but being carried croſs the *Torrid Zone*, it reaches

both

Obliquo terras, & cælum lumine luſtrans:
Ut ratio declarat Eorum, qui loca cæli
Omnia diſpoſitis ſignis ornata notârunt:
Aut quia craſſior eſt certis in partibus Aër,
Sub terris ideo tremulum jubar hæſitat ignis,
Nec penetrare poteſt facilè atque emergere ad ortus.
Propterea noctes hiberno tempore longæ
Ceſſant, dum veniat radiatum inſigne diei:
Aut etiam, quia ſic alternis partibus anni
Tardiùs & citiùs conſuerunt confluere ignes,
Qui faciant Solem certa de ſurgere parte.
Luna poteſt Solis radiis percuſſa nitere,
Inque dies majus lumen convertere nobis
Ad ſpeciem, quantum Solis ſecedit ab orbe,
Donicum eum contra pleno benè lumine fulſit,
Atque oriens obitus ejus ſuper edita vidit:

Inde

Sun finiſhes his annual Revolution, and ſhines upon the Earth and the Heavens with an oblique Light. Such is the Opinion of thoſe who have mark'd out all the Regions of the Heavens, and adorned them with the twelve Conſtellations.

OR it may be, [m] becauſe the Air in ſome Parts is thicker; and therefore the trembling Rays ſtick longer in their Paſſage under the Earth, and cannot ſo eaſily pierce through and diſcharge themſelves, and ſo bring on the Day. For this Reaſon the Nights in the Winter continue longer, till the Sun riſes, and ſcatters the Darkneſs with his Rays of Light.

OR becauſe, at certain Seaſons of the Year, the Seeds of Light which repair the decayed Splendor of the Sun, flow together ſooner or later, and ſo occaſion his Riſing in different Parts of the Heavens.

THE Moon [n] may ſhine with Rays borrowed from the Sun, and appear to us every Day with greater Light, as ſhe retires further from the Sun's Orb; till being directly oppoſite to him, ſhe ſhines out with full Beams, and climbing up the Eaſt, views him from above ſetting in the Weſt;

both the Tropicks, and divides the Circle of the *Æquator*. In the firſt Degree of *Cancer* it touches the North Tropick, which is thence called the *Tropick of Cancer*. It touches the South Tropick in the firſt Degree of *Capricorn*, whence that Tropick has the Name of the *Tropick of Capricorn*. When the Sun comes to the Tropick of *Cancer*, about the Tenth of *June*, then is our Height of Summer, or *Summer Solſtice*; when about the Tenth of *December* he reaches the Tropick of *Capricorn*, then is our Depth of Winter, or the *Winter Solſtice*.

[m] Theſe two Reaſons are trifling.

[n] If the Moon receive her Light from the Sun, if ſhe be a globous Body, and, laſtly, if ſhe make her Rounds below the Sun, then they explain aright her various and manifold Phaſes, who ſay, that the Moon changes her Face according to the different Light ſhe receives from the Sun, as ſhe approaches nearer to him, or retires farther from him.

and

Inde minutatim retrò quasi condere lumen
Debet item, quantò propius jam Solis ad ignem
Labitur ex alia Signorum parte per orbem:
Ut faciunt, Lunam qui fingunt esse pilaï
Consimilem, cursusque viam sub Sole tenere:
Propterea fit uti videantur dicere verum.
Est etiam quoque uti proprio cum lumine possit
Volvier, & varias splendoris reddere formas.
Corpus enim licet esse aliud, quod fertur, & unà
Labitur omnimodis occursans officiensque,
Nec potis est cerni, quia cassum lumine fertur.
Versarique potest, globus ut, si fortè, pilaï
Dimidia ex parti candenti lumine tinctus:
Versandoque globum varianteis edere formas,
Donicum eam partem, quæcunq; est ignibus aucta,
Ad speciem vertit nobis, oculosque patenteis:
Inde minutatim retrò contorquet, & aufert
Luciferam partem glomeraminis, atque pilaï:
Ut Babylonica Chaldæûm doctrina refutans
Astrologorum artem contrà convincere tendit:
Proinde quasi fieri nequeat quod pugnat uterque,
Aut minùs hoc illo sit cur amplectier ausis.

Denique,

and then she goes [o] backwards as it were, and hides her Light gradually, as she passes through the different Signs in her nearer Approaches to the Sun. Thus They explain her Phases, who conclude her round like a Ball, and that she moves below the Sun; and they seem to be right in their Opinion, and speak the Truth.

BUT [p] the Moon, possibly, may steer her Course by her own Light, and shew different Phases and Forms of Brightness; for another Body may move below her, and attending all her Motions, may interpose and hinder her Light from being seen; but this Body, being thick and dark, cannot be discovered by the Eye. *The Phases of the Moon.*

AND perhaps [q] the Moon may roll round her *Axis* like a Ball, whose one Half only is bright. This Ball, as it moves round its Center, will express the different Appearances of Light, till it turns the whole bright Side to us, and shines full upon the open Eye; and then by degrees it turns backward, and takes away its bright Side as it rolls, and we see no more of it. This was the Doctrine of the *Chaldeans*, who followed the Hypothesis of *Berosus*, and attempted to overthrow the vulgar Astrology of the *Greeks*; as if the Schemes of both could not be true, or you had less Reason to embrace the one than the other.

[o] When the Moon is at Full, she goes as it were backwards under the Earth towards the Sun, and comes up to him; whence it is that she decreases by degrees, till being in Conjunction with him, she become invisible to us.

[p] If the Moon shines with unborrowed Light, then we must imagine that another Body, which is opacous and totally dark, always moves with the Moon, and obstructs and turns away her Beams.

[q] He proposes the Opinion of those, who held one Half of the Moon's Orb to be light, the other Half dark. If this Opinion (says he) be true, imagine such an Orb to be turned round on its *Axle*, and it will present the different Phases we behold in the Moon.

Denique, cur nequeat semper nova Luna creari
Ordine formarum certo, certisque figuris:
Inque dies privos abolescere quæque creata,
Atque alia illius reparari in parte, locoque,
Difficile'st ratione docere, & vincere verbis:
Ordine cùm videas tam certo multa creari.
It Ver, & Venus, & Veneris prænuntius antè
Pinnatus graditur Zephyrus vestigia propter:
Flora quibus mater præspergens ante viaï
Cuncta coloribus egregiis, & odoribus opplet.
Inde loci sequitur Calor aridus, & comes una,
Pulverulenta Ceres, & Etesia flabra Aquilonum.
Inde Autumnus adit: Graditur simul Euius Euan:
Inde aliæ tempestates, ventique sequuntur,
Altitonans Vulturnus, & Auster fulmine pollens:
Tandem Bruma niveis adfert, pigrumque rigorem
Reddit, Hyems sequitur, crepitans ac dentibus Algus.
Quò minùs est mirum, si certo tempore Luna
Gignitur, & certo deletur tempore rursus:
Cùm fieri possint tam certo tempore multa.
Solis item quoque defectus, Lunæq; latebras,
Pluribus è causis fieri tibi posse putandum 'st.

Nam

Lastly, Why may not a Moon be created new every Day, and be distinguished by regular Phases, and certain Forms of Light? and this new Orb die, and be succeeded the next Day by another, that should supply its Place in the same Part and Quarter of the Heavens? It is difficult to assign a Reason, and to prove the contrary, especially since we observe so many Things are formed, and succeed one another in a regular Order. And first the Spring begins, and *Venus* enters, with her Harbingers (the winged *Zephyrs*) marching by her Side; then Mother *Flora* spreads the Way before with Flowers of richest Dye, and fills the Air with sweetest Odours; and next advance the scorching Summer, and her Companion the Dusty Harvest, and the *Etesian* Blasts of Northern Winds; and then comes Autumn, and jolly *Bacchus* steps along; now follow ruffling Storms and boisterous Winds, the roaring South-East, and the sultry South full fraught with Thunder; at last the Cold brings on the Snow and chilling Frost, and then creeps Winter, all benumb'd, and chattering with his Teeth. It is the less Wonder then, that the Moon should be formed anew at certain Times, and at fixed Seasons again expire, since so many Things are so regularly produced, and succeed one another.

Eclipses.

The [r] Eclipses of the Sun and Moon may proceed, you may suppose, from many Causes; for

[r] The Sun (he says) is eclipsed when the Moon, or any opacous Body below his Glebe, interposes between that and the Earth, and thus intercepts his Beams, and hinders those Rays of Light from coming forward to the Earth. The Moon is eclipsed when she happens to be in the Shadow of the Earth, or any other opacous Body that is interposed between her Orb and the Sun. Besides, why may not the Sun and Moon grow faint and sicken, nay, as it were fall into a Swoon, when they chance to go through any Places of the Heavens that are infectious to them, and destructive of their Fires and Light?

Nam cur Luna queat Terram secludere Solis
Lumine, & à terris altum caput obstruere ei,
Objiciens cæcum radiis ardentibus orbem:
Tempore eodem aliud facere id non posse putetur
Corpus, quod cassum labatur lumine semper?
Solque suos etiam dimittere languidus igneis
Tempore cur certo nequeat, recreareque lumen,
Cùm loca præteriit flammis infesta per auras:
Quæ faciunt igneis interstingui atque perire?
Et cur Terra queat Lunam spoliare vicissim
Lumine, & oppressum Solem super ipsa tenere,
Menstrua dum rigidas Coni perlabitur umbras:
Tempore eodem aliud nequeat succurrere Lunæ
Corpus, vel supera Solis perlabier orbem,
Quod radios interrumpat, lumenque profusum?
Et tamen ipsa suo si fulgit Luna nitore,
Cur nequeat certa mundi langueſcere parte,
Dum loca luminibus propriis inimica pererrat?
Quod supereſt, quoniam magni per cærula Mundi
Qua fieri quicquid posset ratione, resolvi:
Solis uti varios cursus, Lunæque meatus
Noscere possemus, quæ vis, & causa cieret:
Quove modo soleant offecto lumine obire,
Et nec opinanteis tenebris obducere terras:
Cùm quasi connivent, & aperto lumine rursum
Omnia convisunt clara loca candida luce.
Nunc redeo ad Mundi novitatem, & mollia terræ
Arva, novo fætu quid primùm in luminis oras
Tollere, & incertis tentárit credere ventis.
Principio, genus Herbarum, viridemque nitorem
Terra dedit circum colleis; camposque per omneis
Florida fulserunt viridanti prata colore:

Arbori-

why ſhould the Moon deprive the Earth of the Sun's Light, and as ſhe ſhines above oppoſe her Body to him, and ſtop his burning Rays by thruſting her dark Orb between; and not another Body, wholly dark, be thought to interpoſe at ſuch a Time, and produce the ſame Effect? And why may not the Sun grow faint, and deaden his Light at a certain Time, and renew it again when he has paſſed certain Regions of the Air, that are Enemies to his Beams, and deſtroy and extinguiſh his Fires? And then again, while the Moon in her monthly Courſe paſſes by the rigid Shadow of the Earth, which is of a Conic Figure, why ſhould the Earth rob the Moon of Light, and being above the Sun, hold his Rays ſhut in; and why may not another Body at the ſame Time move below the Moon, and paſs above the Body of the Sun, that may intercept his Rays, and ſtop his ſpreading Fires? And yet, if the Moon be allowed to ſhine with her own Beams, why may not her Brightneſs decay in certain Parts of the World, as ſhe paſſes through Places that are Enemies to her Light?

AND now, ſince I have explained from what Cauſes proceed the Motions of all the celeſtial Bodies, and given you a Rule to know what Force, what Power, drives on the various Courſes of the Sun, and the Wandrings of the Moon; in what manner their ſeveral Rays are intercepted, and the Earth is covered over with ſurpriſing Darkneſs, as if they wink'd; and how again they ſpread open their Beams, and viſit the World with ſhining Light: I now return to the new-form'd Earth, and her tender Soil, to find what kind of Beings ſhe firſt raiſed into Light, what Offspring ſhe firſt ventured to commit to the faithleſs Winds.

AND firſt the Earth produced the Herbs, and ſpread a gay Verdure over all the Hills, and the gaudy Fields ſhone all around with Green; *Herbs firſt produced.*

Arboribuſque datum 'ſt variis exinde per auras
Creſcendi magnum immiſſis certamen habenis.
Ut Pluma atque Pili primùm Setæque creantur
Quadrupedum in membris, & corpore pennipotentum:
Sic nova tum Tellus herbas virgultaque primùm
Suſtulit: inde loci Mortalia ſæcla creavit
Multa modis multis varia ratione coorta.
Nam neque de Cælo cecidiſſe Animalia poſſunt,
Nec terreſtria de ſalſis exiſſe lacunis.
Linquitur ut meritò maternum nomen adepta
Terra ſit, è terra quoniam ſunt cuncta creata.
Multaque nunc etiam exiſtunt animalia Terris,
Imbribus, & calido Solis concreta vapore.
Quò minùs eſt mirum, ſi tum ſunt plura coorta,
Et majora nova Tellure, atque Æthere adulto.
Principiò, genus Alituum, variæque Volucres
Ova relinquebant excluſæ tempore verno:
Folliculos ut nunc teretes æſtate Cicadæ
Linquunt, ſponte ſua victum, vitamque petentes.
Tum tibi Terra dedit primùm Mortalia ſæcla:
Multus enim Calor, atque Humor ſuperabat in arvis.
Hinc ubi quæque loci regio opportuna dabatur,
Creſcebant Uteri terræ radicibus apti;
Quos ubi tempore maturo patefecerat ætas

Infantum

and Nature gave the ſeveral Trees a Power to raiſe themſelves, and grow up with their ſpreading Branches into the Air. As Feathers, and Hair, and Briſtles, were at firſt produced from the Limbs of Beaſts and the Bodies of Birds, ſo the new Earth firſt bore the Herbs and the Trees, and then ſhe formed the many kinds of living Creatures, for various Ends, and after a different Manner: For the Race of Animals did not originally fall down from the Skies, nor could terreſtrial Beings riſe out of the ſalt Sea; and therefore we ſay that the Earth juſtly obtained the Name of *Mother*, becauſe out of Her all Things were formed. Even now many Animals riſe from the Earth, and are produced by Moiſture and the Heat of the Sun; and therefore the Wonder is the leſs, that many more ſhould have been created in the Beginning of the World, and of a larger Size, when the Earth was freſh as a young Bride, and her Huſband *Æther* in the Flower of his Age. *Then Trees.*

Of all the Animal Creation, the feather'd Kind, and various Breed of Birds, firſt broke through the Priſon of the Egg in Time of Spring; as Graſhoppers in the Summer now burſt their curious little Bags, and of themſelves know how to ſeek their Food and preſerve Life. And the [s] Earth next produced the Race of Men and Beaſts, for then there was abundance of vital Heat and Moiſture in the Soil; and where the Place was proper, a ſort of Wombs grew up, fixed and ſticking in the Earth by their Roots. Theſe the Infants ripe for Birth *Birds the firſt Animals.* *The Origin of Man.*

[s] After Birds were hatch'd from Eggs in the Spring, then other Animals and Men burſt forth from certain little Bags or Bladders, which he calls Wombs, that ſtuck to the Earth. For their Nouriſhment, a proper Liquor, like Milk, flowed from the Veins of Mother *Earth* into their infant Mouths; for the Earth, it ſeems, when ſhe brought forth her Young, had Milk in thoſe Days, no leſs than Women now, when they bring forth Children.

Infantum fugiens humorem, auraſque petiſſens,
Convertebat ibi Natura foramina terræ,
Et ſuccum venis cogebat fundere apertis
Conſimilem Lactis: ſicut nunc Fœmina quæque
Cùm peperit, dulci repletur Lacte, quòd omnis
Impetus in mammas convertitur ille alimenti.
Terra cibum Pueris, veſtem Vapor, Herba cubile
Præbebat multa & molli lanugine abundans.

At novitas Mundi nec frigora dura ciebat,
Nec nimios æſtus, nec magnis viribus auras.
Omnia enim pariter creſcunt, & robora ſumunt.
Quare etiam atque etiam maternum nomen adepta
Terra tenet meritò, quoniam genus ipſa creavit
Humanum, atque Animal prope certo tempore fudit
Omne, quod in magnis bacchatur montibu' paſſim,
Aëriaſque ſimul Volucreis variantibu' formis.

Sed quia finem aliquam pariendi debet habere,
Deſtitit, ut Mulier ſpatio defeſſa vetuſto,
Mutat enim mundi naturam totius ætas,
Ex alioque alius ſtatus excipere omnia debet,
Nec manet ulla ſui ſimilis res: omnia migrant,
Omnia commutat Natura, & vertere cogit.
Namque aliud putreſcit, & ævo debile languet:
Porro aliud concreſcit, & è contemtibus exit.
Sic igitur Mundi naturam totius ætas
Mutat, & ex alio Terram ſtatus excipit alter,
Quod potuit, nequeat: poſſit, quod non tulit antè.

Multaque tum Tellus etiam portenta creare
Conata'ſt, mira facie, membriſque coorta;

(*Andro-*

broke through; they left their moiſt Incloſure, and ſprung out into the Air. In thoſe Places Nature prepared the Pores of the Earth, and forced her to pour from her open Veins a Liquor like Milk; as a Woman after Delivery is full of ſweet Milk, becauſe the principal Juices of her Food fly into her Breaſts. The Earth gives Nouriſhment to the Infant, the Warmth of the Sun is inſtead of Clothes, and the Graſs abounding with Plenty of ſoft Down affords the Bed.

BUT this new World produced no chilling Cold, nor too much Heat, nor Force of ruſhing Winds; for Things increaſed and grew violent by degrees: And therefore, by the ſtricteſt Laws of Juſtice, does the Earth claim the Name of *Mother*, becauſe in this Manner, for ſome Time, ſhe herſelf produced Mankind, and formed every ſavage Beaſt that wildly roars upon the Mountain Tops, and the great Variety of Birds, diſtinguiſhed by the Beauty of their Feathers.

AND that the Earth might have ſome Releaſe, and not be always in Labour, ſhe at length left off, as a Woman worn out and paſt her Prime; for Time changes the Nature of the whole World; one Body continually riſes from another; no Being remains long like itſelf; Things are in a perpetual Flux; Nature changes and forces every thing about; one Thing decays and grows weak by Time, another becomes vigorous and flouriſhes in its Strength. Thus Time alters the Face of the whole World; and the Earth paſſes from one State to another. She can no more produce the Creatures ſhe once did, and now ſhe bears what ſhe could not do before.

THE Earth, it may be ſuppoſed, was at firſt delivered of many monſtrous Births, of a wonderful Shape, and of an uncommon Size (and ſome

between

(Androgynum inter utrum, nec utrumque & utrinque remotum)

Orba pedum partim, manuum viduata viciſſim,
Multa ſine ore etiam, ſine voltu cæca reperta,
Vinctaque membrorum per totum corpus adhæſu:
Nec facere ut poſſent quicquam; nec cedere quoquam,
Nec vitare malum, nec ſumere quod foret uſus.
Cætera de genere hoc monſtra, ac portenta creabat:
Nequicquam: quoniam Natura abſterruit auctum:
Nec potuere cupitum ætatis tangere florem,
Nec reperire cibum, nec jungi per Veneris res.
Multa videmus enim rebus concurrere debere,
Ut propagando poſſint producere ſæcla.
Pabula primùm ut ſint, genitalia deinde per artus
Semina quà poſſint membris manare remiſſis:
Fœminaque ut maribus conjungi poſſit, habendum
Mutua queis nectant inter ſe gaudia, utriſque.
Multaque tum interiiſſe Animantum ſæcla neceſſe'ſt.
Nec potuiſſe propagando procudere prolem.
Nam quæcunque vides veſci vitalibus auris,
Aut Dolus, aut Virtus, aut denique Mobilitas eſt
Ex ineunte ævo genus id tutata reſervans.
Multaque ſunt, nobis ex Utilitate ſua quæ
Commendata manent tutelæ tradita noſtræ,
Principiò, genus acre Leonum, ſævaque ſæcla
Tutata'ſt Virtus, Vulpeis Dolus, & Fuga Cervos.
At leviſomna Canum fido cum pectore corda,
Et genus omne, quod eſt Veterino ſemine partum,
Lanigeræque ſimul pecudes, & Bucera ſæcla,
Omnia ſunt Hominum tutelæ tradita, Memmi.
Nam cupidè fugere Feras, pacemque ſecutæ
Sunt, & larga ſuo ſine pabula parta labore:

Quæ

between the two Sexes, not properly of both, yet not far removed from either) ſome without Feet, and others without Hands; many without a Mouth and Eyes; ſome had their Limbs growing and ſticking together over all their Bodies, that they could do no Office of Life, nor move from their Place, nor fly what was hurtful, nor receive Food to preſerve their Beings. Many other Monſters, and ſtrange Productions of this kind, were at firſt formed; but in vain! For Nature was ſhock'd, and would not ſuffer them to increaſe; they could not arrive to any Maturity of Age, nor could they find their Food, nor taſte the Pleaſures of Love; for many Circumſtances, we obſerve, muſt kindly agree, that Creatures might be able to propagate their Kind. Firſt of all there muſt be proper Food, and then fit Organs for the genial Seed to flow through from all the Limbs; and that the Male and Female may be cloſely joined, they muſt be furniſhed with thoſe Parts that may promote the mutual Delights of both.

The Earth produced Monſters.

And therefore many kind of Animals muſt needs be extinct, nor could they all by Propagation continue their Species; for almoſt every Race of Creatures we now ſee living, either their Cunning, or their Courage, or their Swiftneſs, have ſecured and preſerved them from the very Beginning. And there are many that, from their Uſefulneſs to Mankind, have recommended themſelves to our Defence. And firſt, the fierce Breed of Lions, and their ſavage Race, their Courage have protected; Craft ſecures the Fox, and Swiftneſs the Stag. But the watchful and faithful Race of Dogs, all Beaſts of Burden, the Flocks and Herds, all Theſe, my *Memmius*, are committed to the Care of Man. Theſe fly ſwiftly from the Rage of wild Beaſts; they love a quiet Life; and depend upon us for their Fill of Proviſion, without any Labour

Quæ damus Utilitatis eorum præmia causa.
At, queis nil horum tribuit Natura, nec ipsa
Sponte sua possent ut vivere, nec dare nobis
Utilitatem aliquam, quare pateremur eorum
Præsidio nostro pasci genus, esseque tutum?
Scilicet hæc aliis prædæ, lucroque jacebant
Indupedita suis fatalibus omnia vinclis,
Donicum ad interitum genus id natura redegit.
Sed neque Centauri fuerunt, neque tempore in ullo
Esse queat duplici natura, & corpore bino
Ex alienigenis membris compacta potestas,
Hinc illinc par vis ut non sic esse potis sit.
Id licet hinc quamvis hebeti cognoscere corde.
Principio, circum tribus actis impiger annis
Floret Equus, Puer haudquaquam: quin sæpe etiam num
Ubera mammarum in somnis lactantia quærit.
Post ubi Equum validæ vires ætate senecta,
Membraque deficiunt fugienti languida vita:
Tum demum Pueris ævo florente juventas
Occipit, & molli vestit lanugine malas:
Ne forte ex Homine, & Veterino semine equorum
Confieri credas Centauros posse, nec esse:
Aut rapidis canibus succinctas semimarinis
Corporibus Scyllas, & cætera de genere horum,
Inter se quorum discordia membra videmus:
Quæ neque floreſcunt pariter, neque robora sumunt
Corporibus, neque projiciunt ætate senecta:
Nec simili Venere ardescunt, nec moribus unis
Conveniunt, nec sunt eadem jucunda per artus.
Quippe videre licet pingueſcere sæpe Cicuta
Barbigeras pecudes, Homini quæ 'st acre Venenum.

Flamma

Labour of their own, which we allow them plentifully, as a Reward for the Benefits we receive from them. But those Creatures on whom Nature has bestowed no such Qualities, that cannot support themselves, nor afford us any Advantage, why should we suffer such a Race to be fed by our Care, or defended by our Protection? These, by the unhappy Laws of their Nature being destitute of all Things, became an easy Prey to others, till their whole Species was at last destroyed.

No Centaurs nor Chimæra's.

BUT never have there been any such Things as *Centaurs*; nor could a Creature at any Time be formed from a doubtful Nature, from two Bodies, and out of Members so different and disagreeable. The Limbs and Faculties of a Man and Horse, could never act uniformly together, with all their Power; and this is obvious to a very mean Apprehension: For a Horse at three Years old is strong and active; a Child is far from being so, at that Age he is commonly feeling for the Mother's Breast in his Sleep; and when the Horse's Strength decays by old Age, and his feeble Limbs fail him at the End of Life, then the Boy flourishes in the Prime of Youth, and the Beginnings of a Beard appear upon his Cheeks. Never think therefore, that there is or ever can be such a Creature as a *Centaur*, made up of a human Nature, and the servile Seed of a Horse; or that there are any such Things as *Scylla's*, having their Loins surrounded with the ravenous Bodies of half Sea-Dogs. Believe nothing of other Monsters like these, whose Members we observe so opposite and disagreeing; which neither live to the same Age, nor grow strong or decay together; which neither are inflamed with the same sort of Love, nor have the same Dispositions, nor preserve their Bodies by the same Food; for Goats, we see, often grow fat with Hemlock, which to Men is sharp Poison. And since

Fire

Flamma quidem verò cum corpora fulva leonum
Tam soleat torrere, atque urere, quàm genus omne
Visceris, in terris quodcunque & sanguinis extet:
Quî fieri potuit, triplici cum corpore ut una
Prima Leo, postrema Draco, media ipsa Chimæra
Ore foras acrem efflaret de corpore flammam?
Quare etiam Tellure nova, Cæloque recenti
Talia qui fingit potuisse animalia gigni,
Nixus in hoc uno novitatis nomine inani;
Multa licet simili ratione effutiat ore:
Aurea tum dicat per terras Flumina volgò
Fluxisse, & Gemmis florere Arbusta suëssse:
Aut Hominem tanto membrorum esse impete natum,
Trans maria alta pedum nisus ut ponere posset;
Et manibus totum circum se vertere cælum.
Nam quòd multa fuere in terris semina rerum,
Tempore quo primùm Tellus Animalia fudit:
Nil tamen est signi, mistas potuisse creari
Inter se pecudes, compactaque membra animantum:
Propterea quia quæ de terris nunc quoque abundant
Herbarum genera, ac Fruges, Arbustaque læta,
Non tamen inter se possint complexa creari.
Res sic quæque suo ritu procedit: & omnes
Fœdere naturæ certo discrimina servant.
Et genus humanum multò fuit illud in arvis
Durius, ut decuit, Tellus quod dura creâsset:
Et majoribus & solidis magis ossibus intùs
Fundatum, & validis aptum per viscera nervis;
Nec facilè ex æstu, nec frigore quod caperetur:
Nec novitate cibi nec labi corporis ulla.
Multaque per cælum Solis volventia lustra
Volgivago vitam tractabant more ferarum.
Nec robustus erat curvi Moderator aratri

Quisquam

Fire will ſcorch and burn the yellow Body of a Lion, as well as the Bowels of any other Creature living with Blood in its Veins, how could a *Chimæra*, with his Body of three Kinds, with a Lion's Head, a Dragon's Tail, and the Middle like a Goat, blow abroad a fierce Flame out of his Body?

And therefore Thoſe who pretend that this new Earth and vigorous *Æther* could produce ſuch Creatures as Theſe, and ſupport their Fictions only upon the empty Argument of their being New, may with the ſame Reaſon put upon Us with other Fables; they may as well tell us that golden Rivers flow through the Earth, that Trees bloſſom with Diamonds, that Men were made with ſuch mighty Strength and Bulk of Limbs, that they could ſtride with their Feet over wide Seas, and whirl about the Body of the Heavens with their Hands; for though there were many Seeds of Things in the Womb of the Earth, when ſhe firſt began the Production of living Creatures, this is no Rule that Animals could be formed of a mixed Nature, and compounded of different Bodies. The various Products of the Earth, which are in great Abundance, the Herbs, the Fruits and pleaſant Trees, never blended in ſuch Confuſion together; every thing proceeds in its own proper Order, and preſerves its diſtinct Kind by the eſtabliſhed Laws of Nature.

The State of Man.

And the firſt Race of Men were much hardier upon the Earth, as 'twas fit they ſhould, for the hard Earth bore them. They were built within upon larger and more ſolid Bones, and their Limbs were ſtrained with ſtronger Nerves; nor did they eaſily feel the Inclemency of Heat or Cold, or were affected with the Strangeneſs of their Food, or any Weakneſs of Body. They led a long Life of many rolling Years, and wander'd about like wild Beaſts. There was no luſty Huſbandman to guide the

Quisquam, nec scibat ferro molirier arva;
Nec nova defodere in terram virgulta, nec altis
Arboribus veteres decidere falcibu' ramos.
Quod Sol, atque Imbres dederant, quod Terra creârat
Sponte sua, satis id placabat pectora donum;
Glandiferas inter curabant corpora quercus
Plerumque, & quæ nunc hiberno tempore cernis
Arbuta Pæniceo fieri matura colore,
Plurima tum Tellus etiam majora ferebat:
Multaque præterea novitas tum florida mundi
Pabula dia tulit, miseris mortalibus ampla.
At sedare sitim Fluvii Fontesque vocabant:
Ut nunc montibus è magnis decursus aquaï
Claricitat latè sitientia sæcla Ferarum.
Denique noctivagi silvestria templa tenebant
Nympharum, quibus exibant humore fluenta
Lubrica, proluvie larga lavere humida saxa,
Humida saxa super viridi stillantia musco:
Et partim plano scatere atque erumpere campo.
Necdum res Igni scibant tractare, nec uti
Pellibus, & Spoliis corpus vestire ferarum:
Sed Nemora, atque cavos Monteis, Sylvasque colebant,
Et frutices inter condebant squalida membra,
Verbera ventorum vitare imbreisque coacti.
Nec commune bonum poterant spectare, nec ullis
Moribus inter se scibant, nec legibus uti.
Quod cuique obtulerat prædæ fortuna, ferebat,
Sponte sua sibi quisque valere & vivere doctus.
Et Venus in sylvis jungebat corpora amantum.
Conciliabat enim vel mutua quamque cupido,
Vel violenta Viri vis, atque impensa libido:

Vel

the Plough, or that knew how to cultivate the Fields; none to plant young Stocks in the Ground, or with Pruning-Hooks to lop the old Branches from the high Trees. What the Sun, the Rain, and the Earth voluntarily produced, that Bounty satisfied their grateful Hearts. They commonly refreshed their Bodies with Acorns among the Oaks, and with those wild Apples which you see ripen in Winter, of a red Colour, which the Earth then bore in Abundance, and of a larger Size. Many other excellent Fruits the new Earth, fresh and in her Prime, produced in great Plenty for her wretched Offspring.

BUT the Rivers and the Springs invited them to cool their Thirst, as the Fall of Waters from the high Hills call now upon the thirsty Race of Beasts; and wandering in the Night, they rested in hollow Caves, the *Sylvan* Temples of the Nymphs; whence flowed a running Stream, that washed the slippery Stones with its large Current; among the slippery Stones, cover'd with mossy Green, it found its Way, and some of its little Tide broke out and spread into the Plain below.

AS yet they knew nothing of Fire to dress their Food, nor the Use of Skins, or how to cover their Bodies with the Spoils of Beasts; but inhabited the Groves, the hollow Mountains and the Woods, and hid their naked Bodies among the Shrubs; this they did to avoid the Rains and the Blasts of Wind. They had no Regard to the common Good; they had no Order among them, or the Use of Laws; every Man seized for his own what Fortune gave into his Power; every one consulted his own Safety, and took care of himself. Their Amours were consummated in the Woods; either the Ladies were urged on by mutual Heat, or they were overcome by the superior Force and raging Fire of their Gallants, or

Vel pretium, Glandes, atque Arbuta, vel Pira lecta.
Et manuum mira freti virtute, pedumque,
Conſectabantur ſylveſtria ſæcla Ferarum
Miſſilibus ſaxis, & magno pondere clavæ,
Multaque vincebant, vitabant pauca latebris:
Setigeriſque pares Suibus ſylveſtria membra
Nuda dabant terræ nocturno tempore capti,
Circum ſe foliis ac frondibus involventes.
Nec plangore diem magno, Solemque per agros
Querebant pavidi, palantes noctis in umbris:
Sed taciti reſpectabant, ſomnoque ſepulti,
Dum roſea face Sol inferret lumina cælo.
A parvis quod enim conſuerant cernere ſemper
Alterno tenebras, & lucem tempore gigni,
Non erat, ut fieri poſſet, mirarier unquam,
Nec diffidere, ne Terras æterna teneret
Nox, in perpetuum detracto lumine Solis.
Sed magis illud erat curæ, quod ſæcla Ferarum
Infeſtam miſeris faciebant ſæpe quietem:
Ejectique domo fugiebant ſaxea tecta
Setigeri Suis adventu, validique Leonis,
Atque intempeſta cedebant nocte paventes
Hoſpitibus ſævis inſtrata cubilia fronde.
Nec nimio tum plus, quam nunc, mortalia ſæcla
Dulcia linquebant labentis lumina vitæ.
Unus enim tum quiſque magis deprenſus eorum
Pabula viva feris præbebat dentibus hauſtus:
Et nemora ac montes gemitu, ſylvaſque replebat,
Viva videns vivo ſepeliri viſcera buſto.
At quos effugium ſervârat, corpore adeſo,

Poſterius

were ſoftned by Preſents, a Diſh of Acorns, of Apples, or of choice Pears.

These unpoliſhed Mortals, relying on the mighty Strength of their Arms, and the Swiftneſs of their Feet, perſued the wild Beaſts through the Woods, with miſſive Stones and heavy Clubs. Many they hunted down; ſome ſecured themſelves in the thick Brakes; when Night overtook them, like briſtly Hogs, they threw their rough Bodies naked upon the Ground, and rolled themſelves up in Leaves and Graſs; nor did they run howling about the Fields, frighten'd that the Day was gone and the Sun was ſet, or wander'd about in the Darkneſs of the Night; but they waited without Complaint, and lay buried in ſoft Sleep, till the Sun with his roſy Beams ſhould again ſpread Light over the Heavens. For, from their very Infancy, they had been uſed to obſerve, that there was a regular Succeſſion of Light and Darkneſs; and therefore they did not think it poſſible, they never feared or diſtruſted, that an Eternal Night ſhould cover the Earth, or that the Light of the Sun would never more return.

But what diſturb'd them moſt was, that the wild Beaſts often ſurpriſed and deſtroyed them when they were aſleep: They were forced to quit their Haunts, and fly out of the Caverns of the Rocks, at the Approach of the rough Boar or the ſtrong Lion; and trembling, in the dead of Night, to give up their Beds of Leaves to their cruel Gueſts.

And yet, in thoſe Times, fewer died than do now; for then the One unhappy Wretch that was ſeized, was ſure to be devoured alive between their cruel Teeth; and therefore he filled the Groves, the Mountains and the Woods with his Cries, as he ſaw his reeking Bowels buried in a living Grave: But thoſe who ſaved themſelves by

Posterius tremulas super ulcera terra tenentes
Palmas, horriferis accibant vocibus Orcum,
Donicum eos vita privârunt Vermina sæva,
Experteis opis, ignaros quid volnera vellent.
At non multa Virùm sub signis millia ducta
Una dies dabat exitio: nec turbida ponti
Æquora lædebant naves ad saxa, virosque.
Sed temerè, incassùm Mare fluctibu' sæpe coortis
Sævibat, leviterque minas ponebat inaneis,
Nec poterat quemquam placidi pellacia Ponti
Subdola pellicere in fraudem ridentibus undis.
Improba navigii ratio tum cæca jacebat.
Tum Pænuria deinde cibi, languentia letho
Membra dabat: contra nunc rerum Copia mersat.
Illi imprudentes ipsi sibi sæpe Venenum
Vergebant: nunc dant aliis sollertiùs ipsi.
Inde Casas postquam, ac Pelleis, Ignemque pararunt,
Et Mulier conjuncta Viro concessit in unum:
Castaque privatæ Veneris connubia læta
Cognita sunt, Prolemque ex se videre creatam:
Tum genus Humanum primùm mollescere cæpit.
Ignis enim curavit, ut alsia corpora frigus
Non ita jam possent cœli sub tegmine ferre:
Et Venus imminuit vireis, Puerique parentum
Blanditiis facilè ingenium fregêre superbum.
Tunc & amicitiam cœperunt jungere habentes
Finitima inter se nec lædere, nec violare:
Et pueros commendârunt, muliebreque sæclum
Vocibus, & gestu, cùm balbè significarent,
Imbecillorum esse æquum misererier omnium.
Non tamen omnimodis poterat concordia gigni:

Sed

Flight, with their Bodies torn, and covering their ſmarting Wounds with trembling Hands, call'd upon Death in dreadful Accents, till gnawing Worms put an End to their Life; for they were unſkilled in Medicine, and ignorant what to apply to their gaping Sores.

BUT then many Thouſands did not fall in Battle in one Day; no boiſterous Waves daſhed Ships and Men againſt the Rocks. The Sea then, and its ſwelling Tides, raged in vain, and to no purpoſe, and laid aſide its empty Threats, and grew calm again; nor could the deceitful Flattery of its ſmooth Waters cheat any one into the Deceit, or tempt him to venture upon the ſmiling Surface. The dangerous Art of Sailing was then unknown. Many then languiſhed and died wretchedly for want of Food; but now Plenty is the Deſtruction of Mankind. Some then, through Ignorance, would mix Poiſon for themſelves; now they ſtudy the Art, and give it to others.

BUT when they began to build Huts, and provided themſelves with Skins and Fire; when One to One was joined for Life together, and the chaſte ſweet Delights of conſtant Love were now firſt felt, and they ſaw a lovely Train of Children of their own; then this hardy Race firſt began to ſoften; for being uſed to Fire, their tender Bodies could not bear ſo well the Cold of the open Air; and Love impaired their Strength, and the Children, by their little Arts of Fondneſs, eaſily ſoftned the haughty Temper of their Parents: Then thoſe who lived near together began to cultivate a Friendſhip, and agreed not to hurt or injure one another. They undertook the Protection of Children and Women, and declared, by Signs and broken Words, that the Weaker ſhould be underſtood as proper Objects of Compaſſion. This mutual Amity, though it did not prevail among

Sed bona, magnaque pars ſervabant fœdera caſti:
Aut genus Humanum jam tum foret omne peremptum,
Nec potuiſſet adhuc perducere ſæcla propago.
At varios linguæ Sonitus Natura ſubegit
Mittere, & Utilitas expreſſit nomina rerum:
Non alia longè ratione, atque ipſa videtur
Protrahere ad geſtum Pueros infantia linguæ,
Cùm facit, ut digito, quæ ſint præſentia, monſtrent.
Sentit enim vim quiſque ſuam, quam poſſit abuti,
Cornua nata priùs vitulo quam frontibus extent,
Illis iratus petit, atque infenſus inurget.
At catuli Pantherarum, ſcymnique Leonum
Unguibus, ac pedibus jam tum, morſuque repugnant,
Vixdum cùm ipſis ſunt dentes ungueſque creati.
Alituum porro genus alis omne videmus
Fidere, & à pennis tremulum petere auxiliatum,

Proinde

them all, yet the greater and better Part kept their Faith, and lived peaceably together; otherwiſe the whole Race of Men had been ſoon deſtroyed, and the Species could never have been preſerved to this Time.

How Names were firſt impoſed.

[t] Nature compelled them to uſe the various Sounds of the Tongue, and Convenience taught them to expreſs the Names of Things; like Children, before they can well ſpeak, are forced to make uſe of Signs, and are obliged to point with their Finger to the Objects that lie before them; for every Creature is ſenſible what Faculties it has, and how it is to uſe them. So Calves, before the Horns appear upon their Foreheads, will butt fiercely, and puſh with them, when they are enraged; and the Whelps of Panthers and Lions will defend themſelves with their Claws, and Feet, and Teeth, when their Claws and Teeth are ſcarce to be ſeen; and all kind of Birds, we obſerve, truſt to their Wings, and rely upon the fluttering Support of their Pinions.

[t] It may be reaſonably aſked, how Leagues could be made, and Societies eſtabliſhed, among Men, who perhaps indeed could think, but had not yet learnt to utter their Thoughts? *Lucretius* anſwers, that the firſt Men were conſcious to themſelves of their own Powers and natural Faculties; and that they uttered ſeveral Sounds, as each Object that they ſaw, or as any thing that they felt, cauſed in them either Fear, Joy, Pain, Grief, &c. for Nature herſelf compelled them to this; and therefore Horſes, Dogs, Birds, in ſhort, all Animals that have Breath, do the like. And thus Man too, at firſt, ſtammered only imperfect and inarticulate Sounds; but no Commerce was yet eſtabliſhed, they had no mutual Communication with one another; nor indeed could any ſuch Thing be, till Names were given to Things. Every Man therefore perceived that it would be uſeful to him and others, to agree upon a certain Name for each Thing. Thus all who were enter'd into one Society, agreed among themſelves upon the ſame Names of Things; and thus the Uſefulneſs of calling Things by Names, gave occaſion for the Invention of Words: But for any to pretend that one Man gave Names to all Things, is wretchedly abſurd and fooliſh.

Proinde putare Aliquem tum nomina distribuisse
Rebus, & inde Homines didicisse vocabula prima,
Desipere'st: nam cur Hic posset cuncta notare
Vocibus, & varios sonitus emittere linguæ,
Tempore eodem Alii facere id non quisse putentur?
Præterea, si non Alii quoque vocibus usi
Inter se fuerant: unde insita notities est
Utilitatis, & unde data'st Huic prima potestas,
Quid vellet facere, ut scirent, animoque viderent?
Cogere item plureis Unus, victosque domare
Non poterat, rerum ut perdiscere nomina vellent:
Nec ratione docere ulla, suadereque surdis,
Quid facto esset opus, faciles neq; enim paterentur,
Nec ratione ulla sibi ferrent ampliùs aureis
Vocis inauditos sonitus obtundere frustra.
Postremò, quid in hac mirabile tantopere est re,
Si genus Humanum, cui vox, & lingua vigeret,
Pro vario sensu varias res voce notaret,
Cùm Pecudes mutæ, cùm denique sæcla Ferarum
Dissimileis soleant voces variasque ciere,
Cùm Metus, aut Dolor est, & cùm jam Gaudia gliscunt?
Quippe etenim id licet è rebus cognoscere apertis.
Inritata canum cùm primum magna Molossûm
Mollia ricta fremunt duros nudantia denteis:
Longè alio sonitu rabie distracta minantur:
Et cùm jam latrant, & vocibus omnia complent,
At catulos blandè cùm lingua lambere tentant,
Aut ubi eos jactant pedibus, morsuque petentes,
Suspensis teneros imitantur dentibus haustus:

Longè

BUT to think that one Man gave Names to all Things, and that Men from thence learnt the firſt Elements of Speech, is abſurd and ridiculous; for why ſhould one Man diſtinguiſh every thing by a Name, and uſe the various Accents of the Tongue, and at the ſame time another not be as capable of doing This as He?

BESIDES, if others had not the Uſe of Words among them as ſoon, how could they be made acquainted with the Uſe of them? or by what Art would this one Man make them know and underſtand what he deſigned? One alone could not compel the reſt, and by Force make them learn the Catalogue of his Names. He could not prevail by Reaſon, or perſuade Men ſo unfit to hear, to do as he directed; nor would they bear with Patience, or by any means endure, to have the ſtrange Sounds of unintelligible Words any longer rattling in their Ears to no purpoſe.

AND then, what is there ſo very wonderful in This, that Men, to whom Nature has given a Voice and a Tongue, ſhould, according to the various Knowledge they had conceived of the great Variety of Things, diſtinguiſh each of them by a proper Name; when mute Cattle, and the ſeveral Kinds of wild Beaſts, expreſs their Paſſions by different Voices and Sounds, when their Fear, their Grief, or their Joys are ſtrong upon them? And that they do ſo, you may obſerve from evident Examples.

FOR when fierce Maſtiffs are at firſt provoked, they ſnarl, and grin, and ſhew their hard white Teeth, and threaten, in their Rage, with lower Sounds than thoſe they rend the Air with when they bark and roar aloud; but when they gently lick their Whelps with their ſoft Tongue, or toſs them with their Feet, or ſeem to bite, and fondly gape as if to eat them up, but never touch them with

Longè alio pacto gannitu vocis adulant:
Et cùm deserti baubantur in ædibus, aut cùm
Plorantes fugiunt summisso corpore plagas.
Denique non Hinnitus item differre videtur,
Inter equas ubi Equus florenti ætate juvencus
Pinnigeri sævit calcaribus ictus Amoris;
Et fremitum patulis sub naribus edit ad arma:
Ac cùm sis aliàs concussis artubus hinnit?
Postremò, genus Alituum, variæque volucres,
Accipitres, atque Ossifragæ, Mergique marinis
Fluctibus in salsis victum vitamque petentes,
Longè alias alio jaciunt in tempore voces,
Et cum de victu certant, prædaque repugnant:
Et partim mutant cum tempestatibus unà
Raucisonos cantus, Cornicum ut sæcla vetusta,
Corvorumque greges, ubi aquam dicuntur & imbreis
Poscere, & interdum ventos auraſque vocare.
Ergo, si varii sensus Animalia cogunt,
Muta tamen cum sint, varias emittere voces:
Quantò mortaleis magis æquum 'st tum potuisse
Dissimileis alia, atque alia res voce notare?
Illud in his rebus tacitus ne fortè requiras:
Fulmen detulit in terras mortalibus Ignem
Primitùs: Inde omnis Flammarum diditur ardor.
Multa videmus enim cœlestibus incita flammis
Fulgere, cùm cœli donavit plaga vapores.
Et ramosa tamen cùm ventis pulsa vacillans
Æstuat in ramos incumbens arboris Arbor,
Exprimitur validis extritus viribus Ignis:

Et

with their Teeth, they ſhew their Pleaſure with a whining Voice; not ſo, as when they howl, left by themſelves at home; or when they whimper, with their crouching Bodies, to ſhun the coming Blow.

AND does not the Horſe with different Neighings fill the Air, when, hot in Blood and in the Prime of Youth, he is ſorely galled with Spurs of winged Love, and rages in his Luſt among the Mares, and, eager to engage, with open Noſtrils ſnuffs the Scent? Does not he ſhake his trembling Limbs, and neigh, for other Reaſons, with far other Sounds?

AND then, the Feather'd Race, the various kind of Birds, the Hawk, the Oſprey, and Sea-Gulls, that live and ſeek their Food in the ſalt Waves, they throw out other Notes at other times, than when they ſtrive for Food and fight for Prey; and ſome will change their hoarſe Voice according to the different Qualities of the Air; as the long-liv'd Ravens, and the Flocks of Crows, when they are ſaid to call for Rain and Showers, and ſometimes to cry for Wind and Storms. If therefore the different Perception of Things will compel theſe Creatures, mute as they are, to ſend out different Sounds, how much more reaſonable is it, that Men ſhould be able to mark out different Things by different Names?

How Fire began.

YOU may deſire, perhaps, to be ſatisfied in other Inquiries. Know then, that Thunder firſt brought down Fire to the Earth. All the Fire in this lower World is in a great meaſure derived from thence; for many Things, we obſerve, are ſet on Fire by Lightning, when the Vapours fly out from certain Quarters of the Heavens; and the Branches of Trees, preſſing hard upon one another, when they are driven backward and forward by the Winds, grow hot, and by the violent Agitation

Et micat interdum flammaï fervidus ardor,
Mutua dum inter se rami stirpesque teruntur:
Quorum utrumque dedisse potest mortalibus Ignem.
Inde Cibum coquere, ac flammæ mollire vapore
Sol docuit, quoniam mitescere multa videbant
Verberibus radiorum, atque æstu victa per agros.
Inque dies magis hi victum vitamque priorem
Commutare novis monstrabant rebus, & igni,
Ingenio qui præstabant, & corde vigebant.
Condere cœperunt urbeis, arcemque locare
Præsidium Reges ipsi sibi, perfugiumque:
Et pecudes, & agros divisere, atque dedere
Pro Facie cujusque, & Viribus, Ingenioque.
Nam Facies multùm valuit, viresque vigebant:
Posteriùs Res inventa 'st, Aurumque repertum,
Quod facilè & Validis, & Pulchris demsit honorem.
Divitioris enim sectam plerumque sequuntur
Quamlibet & fortes, & pulchro corpore creti.
Quòd siquis vera vitam ratione gubernet,
Divitiæ grandes homini sunt, Vivere parcè
Æquo animo; neque enim 'st unquam pœnuria Parvi:
At claros se homines voluere esse, atque potenteis,
Ut fundamento stabili fortuna maneret,
Et placidam possent Opulenti degere vitam;
Nequicquam: Quoniam ad summum succedere honorem
Certantes, iter infestum fecêre viaï.
Et tamen è summo quasi Fulmen dejicet ictos
Invidia interdum contemtim in Tartara tetra:

Ut

Agitation burſt out into a rapid Flame; and ſometimes the Boughs and Bodies of Trees, by rubbing together, will kindle and fly out into a Blaze. And thus Fire might be produced from either Cauſe.

BUT the Sun firſt taught Mankind to dreſs their Food, and ſoften it by Heat; for they obſerved the Fruits in the Fields grew tender and ripe by the Warmth and Power of his Rays. And ſo thoſe who had more Wit and Senſe, taught their Neighbours every Day to leave their old Diet, and their former way of Life, to enter upon a new Courſe, and uſe the Benefit of Fire.

AND now their Kings began to build Cities, and to raiſe Caſtles, as a Defence to themſelves, and Refuge in Time of Danger. They divided the Cattle and the Fields, and gave to every one as he excelled in Beauty, in Strength and Underſtanding; for Beauty and Strength were then in great Repute, and bore away the Prize. At laſt Riches and Gold were found out, which ſoon took away the Honour from the Strong and Beautiful; even the Brave and the Beautiful themſelves commonly follow the Faction of the Rich. *The Diviſion of Lands.*

BUT if Men would govern their Lives by the Rule of true Reaſon [u], to live upon a little with an even Mind, would be the greateſt Riches. This Little no Man can fear to want; but Men ſtrive to be renowned and powerful, that their Fortune may ſtand firm upon a laſting Foundation, and the Wealthy cannot fail to live at Eaſe. All abſurd! for thoſe who labour to reach the higheſt Honours, make a very unhappy Journey in the End: Envy, like a Thunderbolt, ſtrikes them from the Pinnacle of their Glory, and tumbles them down with Scorn into an Abyſs of Miſery. So that it

[u] Who that reads theſe Lines can believe, that *Epicurus* was an *Epicure?* He believes that a wiſe Man cannot be poor, becauſe he lives content with what he has, and thinks it enough, though it be but a little.

is

Ut ſatiùs multò jam ſit parere quietum,
Quàm regere Imperio res velle, & Regna tenere.
Proinde, ſive incaſsùm defeſſi ſanguine ſudent
Anguſtum per iter luctantes Ambitionis:
Invidia quoniam ſeu Fulmine ſumma vaporant
Plerumque, & quæ ſunt aliis magis edita cunque:
Quandoquidem ſapiunt alieno ex ore: petuntque
Res ex auditis potiùs, quàm ſenſibus ipſis:
Nec magis id nunc eſt, nec erit mox, quàm fuit antè.
Ergo Regibus occiſis ſubverſa jacebat
Priſtina majeſtas ſoliorum, & ſceptra ſuperba;
Et capitis Summi præclarum Inſigne cruentum
Sub pedibus Volgi magnum lugebat honorem:
Nam cupidè conculcatur nimis antè metutum.
Res itaque ad ſummam Fæcem Turbaſque redibat,
Imperium ſibi cùm, ac ſummatum quiſque petebat.
Inde Magiſtratum partim docuere creare,
Juraque conſtituêre. ut vellent legibus uti:
Nam genus Humanum defeſſum vi colere ævum,
Ex inimicitiis languebat; quò magis ipſum
Sponte ſua cecidit ſub leges, arctaque jura:
Acriùs ex Ira quòd enim ſe quiſque parabat
Ulciſci, qnàm nunc conceſſum'ſt Legibus æquis;
Hanc ob rem'ſt Homines pertæſum vi colere ævum:
Unde Metus maculat pœnarum præmia vitæ.
Circumretit enim Vis atque Injuria quemque,
Atque, unde exorta'ſt, ad eum plerumque revertit;
Nec facile'ſt placidam ac pacatam degere vitam,
Qui violat factis communia fœdera pacis.

Etſi

is much safer, as a Subject, to obey, than to wish for Empire and to govern Kingdoms. Let those that will tire themselves in vain, and spend their Blood and their Sweat in climbing the narrow Track of Ambition (for the Highest of them all are blasted with Envy, as with a Thunderbolt; and the higher they are, they are the more exposed) since they depend wholly upon others for their Wisdom, and try Things more by their Ears than by their Understanding. This is the present Case; it always was so, and ever will be.

THOSE Kings then being slain, the former Majesty of their Thrones, and their proud Scepters, were laid in the Dust; and the Diadem, the noble Ornament of Kings, all stained with Blood, is now trodden by vulgar Feet, and weeps over its expiring Honours; for we eagerly spurn at what we too much feared before.

THE Government now returned to the Rabble, and the very Dregs of the People; whilst every one reached at Empire, and the Supreme Power for himself. And therefore the Wisest among them taught the rest to settle a Magistracy, and to establish Laws, by which they would be governed. Men grew weary of living in a State of Force, and were worn out with continual Bickering among themselves, and therefore, of their own accord, more readily fell under the Power of Laws and the Bonds of Justice; for every one, in his Resentment, pursued his Revenge with more Violence than the Equity of the Laws would now allow him, and therefore Men were tired of this hostile way, which soured all their Pleasures of Life with the Fears of Punishment; for Force and Wrong intangle the Man that uses them, and commonly recoil upon the Head that contrived them. Nor is it easy for that Man to live a secure and pleasant Life, who by his Conduct breaks through the common *Republicks.*

Etsi fallit enim Divûm genus Humanumque,
Perpetuò tamen id fore clam diffidere debet:
Quippe ubi se multi per Somnia sæpe loquentes,
Aut Morbo delirantes procrâxe ferantur,
Et celata diu in medium peccata dedisse.

Nunc quæ causa Deûm per magnas Numina genteis
Pervolgârit, & ararum compleverit urbeis,
Suscipiendaque curârit sollennia sacra,
" Quæ nunc in magnis florent sacra rebu' locisque:
Unde etiam nunc est Mortalibus insitus Horror,
Qui delubra Deûm nova toto suscitat orbi
Terrarum, & festis cogit celebrare diebus:
Non ita difficile'st rationem reddere verbis.

Quippe etenim jam tum Divûm Mortalia sæcla
Egregias animo facies vigilante videbant,
Et magis in somnis mirando corporis auctu.
His igitur sensum tribuebant, propterea quod
Membra movere videbantur, vocesque superbas
Mittere pro facie præclara, & viribus amplis:
Æternamque dabant vitam, quia semper eorum
Suppeditabatur facies, & forma manebat,
(Et manet omnino) & quòd tantis viribus auctos
Non temere ulla vi convinci posse putabant.
Fortunisque ideo longè præstare putabant
Quòd mortis timor haud quemquam vexaret eorum,
Et simul in somnis quia multa, & mira videbant
Efficere, & nullum capere ipsos inde laborem.

Præterea, Cœli rationes ordine certo,
Et varia annorum cernebant tempora verti;

Nec

mon Bonds of Peace: Though he has the Cunning to deceive both *Gods* and Men, his Heart always trembles for fear of being discover'd; for Men often talk in their Sleep, and are said to reveal Things when they are delirious by a Disease, and to bring to Light their Plots that had been long concealed.

AND now I'll shew the Cause that first dispersed the Notions of the *Gods* throughout the World, and filled the Towns with Altars, and ordered solemn Rites to be performed, and holy Ceremonies now in Use, when Victims smoke on every sacred Fire; and whence that fixed Horror in the Minds of Men, that builds new Temples to the *Gods* in every Corner of the Earth, and compels Men to celebrate their Festivals: 'Tis not so hard a Thing to shew the Cause.

FOR Men, in the Beginning of the World, were used to see divine and glorious Forms, even when awake; and in their Sleep those Images appeared in more majestick State, and raised their Wonder. And these they thought had Sense. They fancy'd that they moved their Limbs, and spoke proud Words, suitable to the grand Appearance they shew'd, and to the Mightiness of their Strength. They ascribed Eternity to them, because a constant Stream of Images incessantly came on, in Form the same (that could not change) and then, they could not die, because no Power, they thought, could crush Beings so strong in Force, so large in Size: And they thought them infinitely happy, because they were never vexed with the Fears of Death; and likewise in their Dreams they saw them do Things strange and wonderful, with Ease, and without Fatigue.

BESIDES, they observed the Motions of the Heavens were regular and certain, that the various Seasons of the Year came orderly about, but

Nec poterant quibus id fieret cognoscere causis:
Ergo perfugium sibi habebant omnia Divis
Tradere, & illorum nutu facere omnia flecti.
In Cœloque Deûm sedes, & templa locârunt,
Per cœlum volvi quia Sol, & Luna videntur:
Luna, Dies, & Nox, & noctis Signa severa,
Noctivageque faces cœli, Flammæque volantes,
Nubila, Ros, Imbres, Nix, Venti, Fulmina, Grando,
Et rapidi fremitus, & murmura magna minarum.
O genus infelix humanum! talia Divis
Cùm tribuit facta, atque iras adjunxit acerbas:
Quantos tum gemitus Ipsi sibi, quantaque nobis
Volnera; quas lacrymas peperêre minoribu' nostris!
Nec Pietas ulla'st velatum sæpe videri
Vertier ad Lapidem, atq; omneis accedere ad aras;
Nec procumbere humi prostratum, & pandere palmas
Antè Deûm delubra, nec aras sanguine multo
Spargere quadrupedum, nec votis nectere vota:
Sed magè pacata posse omnia mente tueri.
Nam cùm suspicimus magni cœlestia mundi
Templa super, stelliſque micantibus æthera fixum,
Et venit in mentem Solis, Lunæque viarum,
Tunc aliis oppressa malis in pectore cura
Illa quoque expergefactum caput erigere infit,
Ecquæ fortè Deûm nobis immensa potestas
Sit vario motu quæ candida sidera versèt.
Tentat enim dubiam mentem rationis egestas,
Ecquænam fuerit Mundi genitalis origo:

could discover nothing of the Causes of these Revolutions, and therefore they had this Resort; they ascribed every thing to the Power of the *Gods*, and made every thing depend upon their Will and Command.

The Habitation and Abode of these *Gods* they placed in the Heavens, for there they saw the Sun and Moon were rolled about; the Moon, I say, they observed there, and the Day and the Night, and the Stars serenely bright, and the blazing Meteors wandering in the Dark, the flying Lightning, the Clouds, the Dew, the Rain, the Snow, the Thunder, the Hail, the dreadful Noises, the Threatnings and loud Roarings of the Sky.

Unhappy Race of Men! to ascribe such Events, to charge the *Gods* with such distracted Rage. What Sorrow have they brought upon themselves? What Miseries upon us? What Floods of Tears have they intailed upon our Posterity?

Nor can there be any Piety for a Wretch with his Head veiled, to be ever turning himself about towards a Stone, to creep to every Altar, to throw himself flat upon the Ground, to spread his Arms before the Shrines of the *Gods*, to sprinkle the Altars abundantly with the Blood of Beasts, and to heap Vows upon Vows. To look upon Things with an undisturbed Mind, this is Piety; for when we behold the celestial Canopy of the great World, and the Heavens spread over with shining Stars; when we reflect upon the Courses of the Sun and Moon; then Doubts, that before lay quiet under a Load of other Evils, begin to awake, and grow strong within us. What! are there *Gods* endued with so great Power, that can direct the various Motions of all the bright Luminaries above? For the Ignorance of Causes gives great Uneasiness to the doubting Mind of Man. And hence we doubt

Et simul, ecquæ sit finis, quoad mœnia Mundi,
Et tanti motus hunc possint ferre laborem:
An Divinitus æterna donata salute,
Perpetuo possint ævi labentia tractu,
Immensi validas ævi contemnere vireis.
Præterea, cui non animus formidine Divûm
Contrahitur? cui non conrepunt membra pavore,
Fulminis horribili cùm plaga torrida Tellus
Contremit, & magnum percurrunt Murmura cælum?
Non Populi, Gentesque tremunt? Regesque superbi
Conripiunt Divûm perculsi membra timore,
Ne quod ob admissum fædè, dictumve superbè
Pœnarum grave sit solvendi tempus adactum?
Summa etiam cum vis violenti per mare venti
Induperatorem classis super æquora verrit,
Cum validis pariter Legionibus, atque Elephantis:
Non Divûm pacem votis adit? ac prece quæsit
Ventorum pavidus paces, animasque secundas?
Nequicquam: quoniam violento turbine sæpe
Conreptus nihilo fertur minùs ad vada lethi:
Usqueadeo res humanas Vis abdita quædam
Obterit, & pulchros Fascis, sævasque Secureis
Proculcare, ac ludibrio sibi habere videtur.
Denique sub pedibus Tellus cùm tota vacillat,
Concussæque cadunt urbes, dubiæque minantur:
Quid mirum si se temnunt Mortalia sæcla?
Atque potestates magnas, mirasque relinquunt
In rebus vireis Divûm, quæ cuncta gubernent?

whether the World had a Beginning, and ſhall ever have an End; how long the Heavens (the Walls of this World) ſhall be able to bear the Fatigue of ſuch mighty Motions, or whether they are made Eternal by the *Gods*, and ſo ſhall for ever roll on, and deſpiſe the ſtrong Power of devouring Age.

Besides, what Heart does not faint with a Dread of the *Gods?* Whoſe are the Limbs that will not ſhrink, when the ſcorch'd Earth quakes with the horrible Stroke of Lightning, and the roaring Thunder ſcours over the whole Heavens? Do not the People and the Nations ſhake? and proud Tyrants, ſtruck with Fear of thoſe avenging Powers, tremble every Limb, leſt the diſmal Day were come, to puniſh them for the Baſeneſs of their Crimes, and the Arrogance of their Speeches? And when the raging Force of a violent Storm upon the Sea, toſſes the Admiral of a Fleet over the Waves, with all his Elephants and his ſtout Legions about him, does not He fall to praying to the *Gods* for Pity? and, trembling upon his Knees, begs a Peace of the Winds, and a proſperous Gale? In vain! for He is often ſnatched up by the Violence of the Hurricane, and carried with all his Devotion to the *Stygian* Ferry. With ſuch Contempt does ſome hidden Power continually trample upon human Greatneſs; it treads with Scorn upon the gaudy Rods, and the cruel Axes, thoſe Enſigns of Empire, and makes a Sport with them.

And then, when the whole Earth reels under our Feet, and the Cities are ſhaken, and tumble about us, or at leaſt threaten to fall; what wonder if Men, at ſuch a time, deſpiſe their own weak ſelves, and aſcribe infinite Power and irreſiſtible Force to the *Gods*, by which they direct and govern the World?

Quod supereſt, Æs, atque Aurum, Ferrumque repertu'ſt,
Et ſimul argenti pondus, Plumbique poteſtas:
Ignis ubi ingenteis ſylvas ardore cremârat
Montibus in magnis, ſeu cœli fulmine miſſo,
Sive quòd inter ſe bellum ſylveſtre gerentes,
Hoſtibus intulerant ignem formidinis ergo;
Sive quòd inducti Terræ bonitate, volebant
Pandere agros pingueis, & paſcua reddere rura:
Sive Feras interficere, & diteſcere præda:
Nam Fovea, atque Igni priùs eſt venarier ortum,
Quàm ſepire Plagis ſaltum, Canibuſque ciere.
Quicquid id eſt, quacunque è cauſa flammeus ardor
Horribili ſonitu ſylvas exederat altis
Ab radicibus, & terram percoxerat igni,
Manabat venis ferventibus in loca terræ
Concava conveniens Argenti rivus & Auri,
Æris item & Plumbi; quæ cùm concreta videbant
Poſteriùs claro in terris ſplendere colore,
Tollebant nitido capti, lævique lepore:
Et ſimili formata videbant eſſe figura,
Atque lacunarum fuerant veſtigia cuique,
Tum penetrabat eos, poſſe hæc liquefacta calore,
Quamlibet in formam, & faciem decurrere rerum,
Et prorſum quamvis in acuta ac tenuia poſſe
Mucronum duci faſtigia procudendo;
Ut ſibi tela parent, ſylvaſque excidere poſſint,
Materiem lævare, dolare, ac radere tigna,
Et terebrare etiam, ac pertundere, perque forare.
Nec minùs Argento facere hæc Auroque parabant,
Quàm validi primùm violentis viribus Æris:
Nequicquam: Quoniam cedebat victa poteſtas,
Nec poterat pariter durum ſufferre laborem.
Nam fuit in pretio magis Æs, Aurumque jacebat

Propter

AND laſt of all Braſs, and Gold, and Iron, were diſcovered; and the Value of Silver, and the Weight of Lead. For when whole Foreſts upon the high Hills were conſumed by Fire, whether it came by Lightning from the Heavens, or Men carried on a War among themſelves in the Woods, and ſet them in a Blaze to terrify their Enemies; or whether, induced by the Goodneſs of the Soil, they reſolved to inlarge their fruitful Fields, and make Paſtures for their Cattle; or whether it was to deſtroy the wild Beaſts, and inrich themſelves with their Spoils (for the firſt way of taking the Game was, by Pit-falls, and Fire before they ſurrounded the Brakes with Nets, or hunted with Dogs); however it was, or whatever was the Cauſe of this raging Fire, that burnt up the Woods to the very Roots, with frightful Noiſe, and ſet the Earth a boiling with its Heat: Then Streams of Silver and Gold, of Braſs and of Lead, flowed out of the burning Veins into hollow Places of the Earth, that were proper for them. And when the Metal grew hard, and Men obſerved it looking beautifully and ſhining bright upon the Ground, they were charmed with its gay and ſparkling Luſtre, and dug it up; and finding it received the exact Shape of the hollow Moulds in which it lay, they concluded, when it was melted by the Heat, it would run into any Form and Figure they pleaſed, and they might draw it into a ſharp Point or a fine Edge, and make themſelves Tools to cut down the Woods, to ſmooth, to ſquare, and to plane Timber, to pierce, to hollow, and to bore. Theſe Inſtruments they attempted to make of Silver and Gold, no leſs, than by powerful Blows to form the ſtronger Braſs; but in vain! for the ſoft Quality of thoſe Metals gave way, and could not bear the Force and Violence of the Stroke; and ſo Braſs was in moſt

Propter inutilitatem hebeti mucrone retusum,
Nunc jacet Æs, Aurum in summum succesſit honorem:
Sic volvenda ætas commutat tempora rerum,
Quod fuit in pretio, fit nullo denique honore:
Porro aliud succedit, & è contemtibus exit,
Inque dies magis appetitur, floretque repertum
Laudibus, & miro'ſt mortaleis inter honore.
Nunc tibi quo pacto Ferri natura reperta
Sit, facile'ſt ipſum per te cognoſcere, Memmi,
Arma antiqua, Manus, Ungues, Denteſq; fuerunt,
Et Lapides, & item ſylvarum fragmina Rami,
Et Flammæ, atque Ignes poſtquam ſunt cognita primum:
Poſterius Ferri vis eſt, Æriſque reperta:
Et prior Æris erat quàm Ferri cognitus uſus:
Quò facilis magis eſt natura, & copia major.
Ære ſolum terræ tractabant, Æreque belli
Miſcebant fluctus, & volnera vaſta ſerebant,
Et pecus, atque agros adimebant: Nam facilè ollis
Omnia cedebant armatis nuda & inerma.
Inde minutatim proceſſit Ferreus enſis,
Verſaque in opprobrium ſpecies eſt Falcis ahenæ,
Et Ferro cœpere ſolum proſcindere terræ;
Exæquataque ſunt creperi certamina belli.
Et prius eſt reppertum in Equi conſcendere coſtas,
Et moderarier hunc frænis dextraque vigere;
Quàm Bijugo curru belli tentare pericla:
Et bijugo prius eſt, quàm bis conjungere Binos,
Et quàm falciferos inventum aſcendere Currus.
Inde boves Lucas turrito corpore tetros

Anguimanos

Value, and Gold was neglected, as a blunt, useless Metal, that would not hold an Edge. But now Brass is in no Esteem, and Gold succeeds to all its Honours. And thus a Course of flowing Time changes the Dignity of Things: What was highly prized is now treated with Contempt, and what was despised comes into its Place, and is every Day more eagerly persued; is cried up with the greatest Applause, and receives the Respect and Admiration of Mankind.

AND now, my *Memmius*, you may easily, of yourself, perceive by what means the Force of Iron was discovered. The first Weapons were Hands, and Nails, and Teeth, and Stones, and the broken Boughs of Trees; and then they learnt to fight with Fire and Flame; and afterwards was the Strength of Iron and Brass found out. But the Use of Brass was known before the Benefit of Iron was understood; for it was a Metal more easy to work, and in greater Plenty. With brasen Shares they ploughed the Ground, with Arms of Brass they carried on the Rage of War, and dealt deep Wounds about, and seized upon their Neighbours Cattle and their Fields; for every thing naked and unarmed was easily forced to give way. But the iron Sword came gradually into Use, and Instruments of Brass were laid aside with Contempt. And now they began to plough with Iron, and with Weapons of Iron to engage in the doubtful Events of War.

AND Men first learnt to mount the Horse, with their Left Hand to manage the Reins, and they fought with their Right, before they tried the Dangers of War in a Chariot drawn by Two. They first used a Chariot with a Pair, and then they harnessed Four, before they knew how to engage in Chariots armed with Scythes. The *Carthaginians* taught the *Lybian* Elephants, with their serpentine Proboscis

and

Anguimanos belli docuerunt volnera Pœni
Sufferre, & magnas Martis turbare catervas.
Sic alid ex alio peperit Discordia tristis,
Horribile humanis quod gentibus esset in armis:
Inque dies belli terroribus addidit augmen.
Tentârunt etiam Tauros in mœnere belli,
Expertique Sues sævos sunt mittere in hosteis;
Et validos Parthi præ se misere Leones
Cum ductoribus armatis, sævisque magistris,
Qui moderarier hos possent, vinclisque tenere;
Nequicquam: Quoniam permista cæde calentes
Turbabant sævi nullo discrimine turmas,
Terrificas capitum quatientes undique cristas;
Nec poterant Equites fremitu perterrita equorum
Pectora mulcere, & frœnis convertere in hosteis.
Inritata Leæ jaciebant corpora saltu
Undique, & advorsum venientibus ora petebant:
Et nec-opinanteis à tergo diripiebant,
Deplexæq; dabant in terram volnere vinctos:
Morsibus adfixæ validis, atque unguibus uncis.
Jactabantque Sues Tauri, pedibusque terebant;
Et latera, ac ventres hauribant subter equorum
Cornibus, ad terramque minanti mente ruebant.
At validis socios cædebant dentibus Apri,
" *Tela infracta suo tinguentes sanguine sævi:*
" *In se fracta suo tinguentes sanguine tela:*
Permistasque dabant equitum peditumque ruinas.
Nam transversa feros exibant dentis adactus
Jumenta, aut pedibus ventos erecta petebant:
Nequicquam: Quoniam à nervis succisa videres
Concidere, atque gravi terram consternere casu.

Sic,

and Towers upon their Backs, to bear the Smart of Wounds, and to disorder the embattled Ranks of the Enemy. And thus the Rage of Discord found out one Art of Slaughter after another, as the dreadful Scourges of Mankind, and increased the Terrors of War every Day. They tried the Fury of Bulls in their Battles, and drove Boars against their cruel Enemies. The *Parthians* placed roaring Lions before their Ranks, with their armed Keepers, and fierce Leaders, to govern their Rage and hold them in Chains: In vain! for growing hot with the mixed Blood they had tasted, they broke in their Fury through the Troops of Friends and Enemies without Distinction, shaking their dreadful Manes on every Side. Nor could the Horsemen cool their frighted Horses, distracted with the Roaring of the Beasts, or turn them with the Reins against the Foe. The Lions with Rage sprung out, and threw their Bodies every way, and flew upon the Faces that they met; others they suddenly fell on behind, and clasped within their Paws, and with sore Wounds o'ercome, they flung them to the Ground, and held them down with their strong Teeth, and with their crooked Claws. The Bulls would toss the Boars, and crush them with their Feet, and with their Horns would gore the Sides and Bellies of the Horses, and in their Rage bear them to the Earth. The Bears with their strong Teeth destroyed their Friends (and cruelly stained the Darts unbroken, with their Master's Blood, the Darts that broke upon themselves were stained with their own) and brought confused Ruin upon Man and Horse; for though the Horse, by leaping aside, would strive to fly the cruel Biting of their Teeth, or, rearing up, paw'd with their Feet the yielding Air; yet all in vain! you would see them, hamstrung by the Beasts, fall down, and with their heavy Weight would shake the Ground.

Sic, quos antè domi domitos ſatis eſſe putabant,
Effervíſcere cernebant in rebus agundis,
Volneribus, clamore, fuga, terrore, tumultu:
Nec poterant ullam partem redducere eorum.
Diffugiebat enim varium genus omne ferarum:
Ut nunc ſæpe boves Lucæ ferro malè mactæ
Diffugiunt, fera facta ſuis cùm multa dedere.
Sic fuit, ut facerent: Sed vix adducor, ut antè
Non quierint animo præſentire, atque videre,
Quàm commune malum fuerat, fædumq; futurum.
Et magis id poſſis factum contendere in Omni,
In variis mundis varia ratione creatis,
Quàm certò atq; uno terrarum quolibet Orbi.
Sed facere id non tam vincendi ſpe voluerunt,
Quam dare quod gemerent hoſtes, ipſique perire,
Qui numero diffidebant, armiſque vacabant.
Nexilis antè fuit veſtis, quàm Textile tegmen:
Textile poſt ferrum'ſt: quia ferro tela parantur:
Nec ratione alia poſſunt tam lævia gigni
Inſilia, ac fuſi, & radii, ſcapique ſonantes.
Et facere antè Viros lanam Natura coëgit,
Quàm Muliebre genus, nam longè præſtat in arte,
Et ſollertius eſt multò genus omne Virile:
Agricolæ donec vitio vertere ſeveri,
Ut Muliebribus id manibus concedere vellent,
Atque ipſi potiùs durum ſufferre laborem:
Atque opere in duro durarent membra, manuſque.

Ground. These Creatures therefore that Men saw were tame at home, now brought into the Wars grew mad with Wounds, with Noise, with Flying, with Terror, and the Tumult of the Battle; nor could they by any means be brought back or cool'd again, but every kind flew wildly o'er the Plains; as when a Bull, not rightly struck by the Priest's sacrificing Axe, breaks loose, after much Mischief done to all about him. These were the first Arts of War; yet I cannot believe but the first Inventors must consider and foresee the common Evils and sad Calamities they must occasion. This, it is safer to say, was the Case in general in some of all the Worlds that were created in various Manners, than to be particular and fix it upon One only. But they made Use of Beasts in their Wars, not so much from a Hope of Victory, as to annoy and torment their Enemies; being themselves sure to die, because they distrusted their Numbers, and were unskilled in the Use of Arms.

THEIR Garments were the Skins of Beasts, pinn'd together with Thorns, before they had learned to weave. The Art of Weaving came in after the Discovery of Iron, for their Tools were made of that Metal; nor could the smooth Treadles, the Spindles, the Shittles, and the rattling Beams be formed any other way. But Nature at first compelled the Men to Card and Spin, before the Women undertook the Trade; for Men by far exceed the other Sex in the Invention of Arts, and work with greater Skill. The sturdy Peasants at length reproached these Male Spinsters, and obliged them to give up the Business into the Women's Hands; and then they betook themselves to more laborious Employments, and harden'd their Limbs and their Hands with rougher Work.

BUT

At ſpecimen Sationis, & Inſitionis origo
Ipſa fuit rerum primùm Natura creatrix.
Arboribus quoniam baccæ, glandeſque caducæ
Tempeſtiva dabant pullorum examina ſubter.
Unde etiam libitum'ſt ſtirpeis committere ramis:
Et nova defodere in terram virgulta per agros:
Inde aliam, atque aliam culturam dulcis agelli
Tentabant, fructuſque feros manſueſcere terra
Cernebant indulgendo, blandèque colendo.
Inque dies magis in montem ſuccedere ſylvas
Cogebant, infraque locum concedere cultis:
Prata, Lacus, Rivos, Segetes, Vinetaque læta
Collibus, & campis ut haberent, atque olearum
Cærula diſtinguens inter plaga currere poſſet
Per tumulos, & convalleis, campoſque profuſa:
Ut nunc eſſe vides vario diſtincta lepore
Omnia, quæ pomis interſita dulcibus ornant:
Arbuſtiſque tenent felicibus obſita circùm.
At liquidas avium voces imitarier ore
Antè fuit multò, quàm lævia carmina Cantu
Concelebrare homines poſſent, aureiſque juvare.
Et Zephyri cava per calamorum ſibila primum
Agreſteis docuere cavas inflare cicutas,
Inde minutatim dulceis didicere querelas,
Tibia quas fundit digitis pulſata canentum,
Avia per nemora, ac ſylvas ſaltuſque reperta,
Per loca paſtorum deſerta, atque otia dia:
Sic unum quicquid paullatim protrahit Ætas
In medium, Ratioque in luminis eruit oras.
Hæc animos ollis mulcebant atque juvabant

Cum

But Nature herſelf (the great Mother of all Things) firſt taught Men to Sow and to Graft; for the Berries and the Acorns that fell from the Trees, they obſerved, produced young Shoots underneath, in a proper Seaſon of the Year: And hence they began to graft fruitful Slips into the Boughs, and to plant young Stocks over all the Fields. Then they tried every other Art to improve the kindly Soil; and they found the wild Fruits grew ſweet and large, by inriching the Earth, and dreſſing it with greater Care. They employed themſelves continually in reducing the Woods to narrower Bounds upon the Hills, and to cultivate the lower Places for Corn and Fruits. Thus they had the Benefit of Meadows, of Lakes, of Rivers, of Corn Fields, and pleaſant Vineyards, upon the Side of the Hills, and in the Dales; and of green Rows of Olives, regularly running between upon the riſing Grounds, and in the Valleys, and ſpread over all the Plains: As you ſee our Country Farms now laid out in all the Variety of Beauty, where the ſweet Apples are intermixed, and adorn the Scene, and fruitful Trees are delightfully planted round all the Fields.

And Men attempted to imitate by the Mouth the charming Voice of Birds, before they tried to Sing, or to delight the Ear with tuneful Verſe: And the ſoft Murmurs of the Reeds, moved by a gentle Gale, firſt taught them how to blow the hollow Reed, and by degrees to learn the tender Notes; ſuch as the Pipe, by nimble Fingers preſſed, ſends out when ſweetly ſung to; the Pipe, that now is heard in all the Woods and Groves, and all the Lawns, where Shepherds take their ſolitary Walks, and ſpend their Days in Innocence and Eaſe. Thus Time by degrees draws every thing into Uſe, and Skill and Ingenuity raiſe it to Perfection. Thus Muſick ſoftned and relieved

Cum ſatiate cibi: nam tum ſunt omnia cordi.
Sæpe itaque inter ſe proſtrati in gramine molli
Propter aquæ rivum, ſub ramis arboris altæ.
Non magnis opibus jucundè corpora habebant:
Præſertim cum tempeſtas ridebat, & anni
Tempora pingebant viridanteis floribus herbas,
Tum Joca, tum Sermo, tum dulces eſſe Cachinni
Conſuerant: agreſtis enim tum Muſa vigebat:
Tum caput, atque humeros plexis redimire coronis,
Floribus, & foliis laſcivia læta monebat:
Atque extra numerum procedere membra moventeis
Duriter, & duro terram pede pellere matrem:
Unde oriebantur Riſus, dulceſque Cachinni,
Omnia quod nova tum magis hæc, & mira vigebant.
Et vigilantibus hinc aderant ſolatia ſomni,
Ducere multimodis voces, & flectere cantus;
Et ſupera calamos unco percurrere labro:
Unde etiam vigiles nunc hæc accepta tuentur,
Et numerûm ſervare genus didicere; neque hilo
Majorem interea capiunt dulcedini' fructum,
Quàm Sylveſtre genus capiebat Terrigenarum.
Nam quod adeſt præſto, niſi quid cognovimus antè
Suavius, in primis placet, & pollere videtur;
Poſteriorque ferè melior res illa reperta
Perdit, & immutat ſenſus ad priſtina quæque.
Sic odium cæpit Glandis: ſic illa relicta
Strata Cubilia ſunt herbis, & frondibus aucta.
Pellis item cecidit, veſtis contempta Ferina'ſt,
Quam reor invidia tali tunc eſſe repertam;

Ut

relieved the Minds of these rude Swains, after their rural Feasts; for then the Heart's at Ease; and then they sweetly indulge their Bodies, as they lie together on the soft Grass, hard by a River's Side, under the Boughs of some high Tree, without a Heap of Wealth. Chiefly when the Spring smiles, and the Season of the Year sprinkles the verdant Herbs with flowery Pride; then Jests, and smart Conceits, and the loud Laugh went round; and then the rustick Muse sung out, and, gay and jocund in their Sports, they crowned their Heads, and on their Shoulders hung Garlands of Flowers and Leaves, and with unequal Steps they rudely moved their Limbs, and shook their Mother *Earth* with their hard Feet; and then the Laugh began, and pleasant Grin, at these strange Gambols, never seen before. And thus they kept awake; and, as refreshed by comfortable Sleep, they spent the Night in trolling Country Songs, and making Mouths to many an aukward Tune, and running o'er the Reeds with crooked Lip. These are the Pleasures now our wanton Youth persue, who sit up all the Night; they learn to dance in measure, but receive no more Delight than did that rustick Race of Earth-born Swains so long ago.

FOR while we know no better, and enjoy a present Good, it wonderfully pleases and delights us above all Things; but when we discover something more agreeable, this destroys and changes the Relish of what went before. So Acorns became odious to the Palate; and the Beds of Grass and Leaves were laid aside; and Skins went out of Use, and that savage sort of Cloathing was despised; and yet [x], I think, he that first wore it

[x] *Faber* says, that the first Garment, though a worthless undressed Skin of a Beast, so pleased these Earth-born Men, that it was the Cause of his Death who first invented and wore it.

Ut lethum insidiis, qui gessit primus, obiret:
Et tandem inter eos distractum, sanguine multo
Dispersisse, neque in fructum convertere quîsse.
Tunc igitur Pelles, nunc Aurum, & Purpura curis
Exercent hominum vitam, belloque fatigant.
Quò magis in nobis (ut opinor) culpa resîdit.
Frigus enim nudos sine Pellibus excruciabat
Terrigenas: at nos nil lædit veste carere
Purpurea, atque Auro, signisque ingentibus apta;
Dum Plebeia tamen sit, quæ defendere possit:
Ergo hominum genus incassum, frustraque laborat,
Semper & in curis consumit inanibus ævum;
Nimirum, quia non cognovit, quæ sit habendi
Finis, & omnino quoad crescat vera voluptas:
Idque minutatim vitam provexit in Altum,
Et belli magnos commovit funditus æstus.
At vigiles mundi magnum & versatile templum
Sol & Luna suo lustrantes lumine circùm
Perdocuere homines Annorum tempora verti:
Et certa ratione geri rem, atque ordine certo.
Jam validis septi degebant Turribus ævum,
Et divisa colebatur, discretaque tellus.
Tum Mare velivolum florebat navibu' pandis:
Auxilia, & socios jam pacto fœdere habebant:
Carminibus cùm res gestas cœpêre Poetæ
Tradere: nec multò priù' sunt Elementa reperta.
Propterea quid sit priùs actum respicere ætas
Nostra nequit, nisi quà ratio vestigia monstrat.

Navigia,

raiſed ſuch Envy to himſelf, that he was treacherouſly ſlain, he was torn to Pieces, and his leathern Garment ſtained with his own Blood, nor was he ſuffer'd to enjoy the Fruit of his own Invention.

AT that time Men fought for Skins, but now Gold and Purple employ their Cares, and ſet them together by the Ears: And, I think, we are much more to blame of the two; for without the Uſe of Skins, the Cold would have been very grievous to thoſe Earth-born Wretches; but we ſuffer nothing, if we go without Purple or Cloth of Gold, embroider'd in the richeſt Figures, ſince a meaner Dreſs would as well ſecure us againſt the Cold.

WRETCHED therefore, and vain, are the Troubles of Mankind; they ſpend their whole Life in the Perſuit of empty Cares; and no wonder, ſince they fix no Limits to what they poſſeſs, and know nothing how far the Bounds of true Pleaſure may extend: And this Ignorance carries them by degrees into a Sea of Evils, and raiſes the moſt violent Storms of War throughout the World.

BUT the wakeful Sun and Moon, ſurveying with their Light the great and rolling Skies, have taught Men, that the Seaſons of the Year are turned about, and that Things are carried on by certain Rules, and in a fixed Order.

AND now Mankind incloſed themſelves and lived in Caſtles; the Lands were parted out, and each enjoyed his own; the Sea was ſailed o'er by crooked Ships, and Men joined together for Defence, and formed Alliances by certain Bonds. The Poets then began to celebrate in Verſe the great Exploits, and Letters were not long before diſcover'd. What was tranſacted many Ages paſt, thoſe Times knew nothing of, but what their Reaſon darkly traced out.

Navigia, atque Agri culturas, Mœnia, Leges,
Arma, Vias, Veſteis, & cætera de genere horum,
Præmia, delicias quoque vitæ funditus omneis,
Carmina, Picturas, & dædala ſigna polire,
Uſus, & impigræ ſimul Experientia mentis
Paullatim docuit pedetentim progredientes.
Sic unum quicquid paullatim protrahit ætas
In medium, ratioque in luminis eruit oras.
Namque alid ex alio clareſcere corde videmus
Artibus, ad ſummum donec venêre cacumen.

USE therefore, and the Experience of an enquiring Mind, led Men by degrees into the Knowledge of Navigation, of Agriculture; taught them to build Walls, to make Laws, Arms, Publick Ways, Garments, and other Things of the ſame nature; made them acquainted with Poetry, Painting, and Statuary. Thus Time gradually produces every thing into Uſe, and Reaſon ſhews it in a clear Light: One Art, we obſerve, is refined and poliſhed by another, till they arrive at the higheſt Point of Perfection.

The End of the Fifth Book.

THE ARGUMENT OF THE SIXTH BOOK.

HE *begins with the Praiſe of* Athens, *the City where* Epicurus *was born, and beſtows a great Encomium upon that Philoſopher. He gives an Account of the Subject of this Book, in a manner ſuited to the Principles of an* Epicurean. *He then explains the Nature of Meteors: And, leſt Men ſhould be terrified with the Roaring of* Jupiter's *Thunder, he tells us, that Thunder is produced either from the Colliſion, or Corraſion, or Diſruption of the Clouds; or by the Fire of Winds, either ſtruggling within the Bowels of the Clouds, or driving them with Violence againſt each other; or that it ariſes only from the Hiſſing of Flames, that fall from a dry Cloud into a wet; or, laſtly, that Thunder is but the cruſhing Noiſe of Bodies of Hail and Ice, that meeting violently in the Air, are daſhed to Pieces. As for the Lightning, which the* Latins *call* Fulgur, *he ſays it is nothing but Fire forc'd out of Clouds, either by their Colliſion or other Motion, or the Seeds of Flames that are driven out of Clouds by the Force of Winds. And then, as to the Thunderbolt, that other ſort of Lightning, which the Ancients call* Fulmen, *he teaches, that it conſiſts of a ſubtle and fiery Na-*

ture; that it is conceived and bred in thick and high-raiſed Clouds; that being full ripe, it burſts out of the Clouds by the Force of Wind, that either breaks through them, claſhes them to Pieces, or beats from without with great Violence againſt them; that it conſiſts of Atoms ſo ſubtle and minute, that it is borne along the Air with wonderful Celerity; and that it is moſt frequent in the Vernal and Autumnal Seaſons. He derides the ſuperſtitious Doctrine of the Thuſcans *and others, who held, that Thunder and Lightning are not the Effects of natural Cauſes, but proceed merely from the Will of the offended, angry* Gods; *and that* Jupiter *himſelf is the Darter of Thunder: And becauſe a Preſter, or fiery Whirlwind, which is indeed a ſort of Lightning, and all other Whirlwinds are certain kind of Meteors, he diſputes concerning them, and explains the Nature, Cauſes, Motions, and Differences of them. He then treats of Clouds and of Rain: Clouds, he ſuppoſes, are either made of the roughest and moſt dry Particles of the Air, or of the Steams, Vapours, and Exhalations, that ariſe from the Earth and Waters: Rain, he ſays, is generated either by Compreſſion, as they call it, or by Tranſmutation; by Compreſſion, if the Force of the Winds ſqueeze the Water out of the Clouds; by Tranſmutation, if the Clouds themſelves are changed, and diſtill in falling Drops of Water. As to the other Meteors, the Rainbow, Snow, Wind, Hail, and Froſt, he only mentions them. He then proceeds to the ſeveral ſorts of Earthquakes, and the Cauſes of them; which he aſcribes either to hollow Parts of the Earth, which falling in, cauſe it to tremble; or to the tremulous Motion of the Waters, which he ſuppoſes the Earth to ſwim in; or to ſubterraneous and other Winds, which either ſhake the Earth in ſeveral Parts, or drive it to and fro. He obſerves why the Sea does not increaſe, notwithſtanding the immenſe Quantity of Water flowing into it;*

and

and imputes it either to the Vaſtneſs of the Sea itſelf; or becauſe the Heat of the Sun dries up its Waters; or becauſe the Winds, bruſhing over them, bear much of them away; or becauſe the Clouds draw much Moiſture from them; or, laſtly, becauſe of the Dryneſs of the Earth itſelf, which ſucks in and imbibes the Waters of the Sea. He ſearches into the Cauſes of the Burning of Mount Ætna; *and it proceeds, he ſays, either from the Violence of the Wind, or to the Exæſtuation of the Waters of the Sea, which entring beneath into the Cavities of the Mountain, extrude and force out the Seeds of the Flame that are engender'd and collected there, through the Openings that are on the Top of it. He treats of the annual Increaſe of the* Nile; *and aſcribes it either to the* Eteſian *Winds, that blow full againſt the Stream of that River, and thus hindring its Courſe, cauſe the Waters to overflow; or to Heaps of Sand which the Sea drives to the Mouths of it, and thus choaks them up; or to the Rains and Snows that fall, and are melted near the Fountain of the* Nile. *He then diſputes of the* Averni, *and other Tracts of the Earth, that are noxious, and even deadly to Birds, Men, Deer, Crows, Horſes,* &c. *He teaches why the Water of ſome Wells and Springs is hot in Winter and cold in Summer; and explains at large the attractive Power and Virtue of the Loadſtone. To the End of the Book he diſcourſes briefly of the Cauſe and Origin of Plagues and Diſeaſes; and concludes his Poem with an elegant Deſcription, taken from* Thucydides, *of the Plague that raged in* Athens, *and almoſt laid waſte the whole Country of* Attica, *in the Time of the* Peloponneſian *War.*

T. Lu-

T. Lucretii Cari

DE

RERUM NATURA.

LIBER SEXTUS.

PRIMÆ frugiferos fœtus mortalibus ægris
Dididerunt quondam præclaro nomine Athenæ:
Et recreaverunt vitam, Legesque rogârunt:
At primæ dederunt solatia dulcia vitæ,
Cùm genuere VIRUM *tali cum corde repertum,*
Omnia veridico qui quondam ex ore profudit:
Cujus & extincti propter divina reperta
Divolgata vetus, jam ad cælum Gloria fertur.
Nam cùm vidit Hic, ad victum quæ flagitat usus,
" *Et per quæ possent vitam consistere tutam,*

Omnia

Right

P Mignard pinx.
L du Guernier sculp.
Lib. 6

T. Lucretius Carus,

OF THE

NATURE *of* THINGS.

THE

SIXTH BOOK.

RENOWNED [a] *Athens* firſt to wretched Man gave the ſweet Fruits, and human Life refreſhed, and publiſhed Laws; but Comforts nobler far than Theſe ſhe gave, when to the World ſhe ſhew'd Great *Epicurus*, formed with ſuch a Soul; who from his Mouth deliver'd ſublime Truths, as from an Oracle; whoſe Fame for ſo Divine Diſcoveries, diſperſed every way abroad, was raiſed after Death above the Skies. *The Praiſe of* Epicurus.

FOR when He ſaw how little would ſuffice for neceſſary Uſe, and by what ſmall Proviſions Life

[a] It is the general Opinion of the Ancients, that the *Athenians* firſt taught Men, who fed before upon Acorns, to plough the Earth, and to ſow Corn; and that they were the firſt likewiſe who made Laws, and compelled Men to quit their ſavage way of Life, and to enter into civil Society.

might

Omnia jam ferme Mortalibus esse parata :
Divitiis homines, & Honore, & Laude potenteis
Affluere, atque bona Natorum excellere fama :
Nec minùs esse domi cuiquam tamen Anxia corda,
Atque animum infestis cogi servire querelis :
Intellexit, ibi vitium Vas efficere ipsum,
Omniaque illius vitio corrumpier intùs,
Quæ conlata foris, & commoda cunque venirent,
Partim quod fluxum, pertusumque esse videbat,
Ut nulla posset ratione explerier unquam :
Partim quòd tetro quasi conspurcare sapore
Omnia cernebat quæcunque receperat intùs.
Veridicis igitur purgavit pectora dictis,
Et finem statuit Cuppedinis atque Timoris,
Expositque Bonum Summum, quò tendimus omnes,
Quid foret, atque viam monstravit tramite prono,
Quà possemus ad id recto contendere cursu :
Quidve Mali foret in rebus mortalibu' passim,
Quod flueret Naturæ vi, varièque volaret,
Seu Casu, seu Vi, quòd sic Natura parâsset :
Et quibus è portis occurri cuique deceret :
Et genus Humanum frustra plerumque probavit
Volvere curarum tristeis in pectore fluctus.
Nam veluti Pueri trepidant, atque omnia cæcis
In tenebris metuunt, sic Nos in luce timemus
Interdum nihilò quæ sunt metuenda magis, quàm
Quæ Pueri in tenebris pavitant, finguntque futura.
Hunc igitur terrorem animi, tenebrasque necesse'st
Non radii Solis, nec lucida tela diei
Discutiant, sed Naturæ species, Ratioque :
Quò magis inceptum pergam pertexere dictis.

might be preſerved; that Nature had prepared every thing ready to ſupport Mankind; that Men abounded with Wealth, and were loaded with Honour and Applauſe, and happy in their private Concerns, in the good Character of their Children, and yet their Minds were reſtleſs at home, complaining and lamenting the Miſery of their Condition; He perceived the Veſſel itſelf (the Mind) was the Cauſe of the Calamity, and by the Corruption of That, every thing, though ever ſo good, that was poured into it was tainted: It was full of Holes, and run out, and ſo could never by any means be filled; and whatever it received within, it infected with a ſtinking Smell. And therefore He purged the Mind by True Philoſophy, and ſet Bounds to our Deſires and our Fears. He laid open to us the chief Good, that Point of Happineſs we all aim at, in what it conſiſts, and ſhewed us the direct way that leads to it, and puts us into the ſtraight Road to obtain it. He taught what Misfortunes commonly attend human Life, whether they flow from the Laws of Nature or from Chance, whether from Neceſſity or by Accident; and by what means we are to oppoſe thoſe Evils, and ſtrive againſt them. And He has fully proved, that Mankind torment themſelves in vain, and are toſſed about in a tempeſtuous Ocean of Cares to no purpoſe.

FOR as Boys tremble and fear every thing in the dark Night, ſo we in open Day fear Things as vain, and little to be dreaded, as thoſe that Children quake at in the Dark, and fancy advancing towards them. This Terror of the Mind, this Darkneſs then, not the Sun's Beams, nor the bright Rays of Day can ſcatter, but the Light of Nature and the Rules of Reaſon; and therefore I ſhall the more readily proceed to execute what I have begun.

AND

Et quoniam docui, Mundi mortalia templa
Esse, & nativo consistere corpore Cælum:
Et quæcunque in eo fiunt, fientque, necesse
Esse ea dissolvi: Quæ restant percipe porro.
Quandoquidem semel insignem conscendere currum
Vincendi spes hortata'st, atque obvia cursu
Quæ fuerant, sunt placato conversa furore.
Cætera, quæ fieri in Terris, cæloque tuentur
Mortales, pavidis cùm pendent mentibu' sæpe
Efficiunt animos humileis formidine Divûm,
Depressosque premunt ad terram, propterea quòd
Ignorantia causarum conferre Deorum
Cogit ad imperium res, & concedere regnum: &
Quorum operum causas nulla ratione videre
Possunt hæc fieri Divino numine rentur.
Nam bene qui didicere Deos securum agere ævum:
Si tamen interea mirantur, qua ratione
Quæque geri possint, præsertim rebus in illis,
Quæ supera caput ætheriis cernuntur in oris,
Rursus in antiquas referuntur Relligiones,
Et Dominos acreis asciscunt, omnia posse
Quos miseri credunt, ignari quid queat esse,
Quid nequeat; finita potestas denique cuique
Quanam sit ratione, atque altè terminus hærens.
Quò magis errantes tota regione feruntur.
Quæ nisi respuis ex animo, longèque remittis,
Diis indigna putando, alienaque pacis eorum,
Delibata Deûm per te tibi numina sancta

Sæpe

AND since I taught the Fabrick of the World was mortal, and that the Heavens are formed of corruptible Seeds, and whatever they do, or ever will contain, must necessarily be dissolved; attend now to what remains, especially since the Hope of carrying the Prize has encouraged me to ascend the Chariot, and engage in so noble a Race; and since the Difficulties that once attended the Course are removed, and the Roughness of the Way is made favourable and easy.

THE various Wonders Men behold in the Earth and in the Heavens, perplex their Minds, trembling and in Suspense, and make them humble with the Fear of the *Gods*, and press them groveling to the Ground; and being ignorant of the Cause of these Events, they are forced to confess the Sovereignty, and give up every thing to the Command of these Deities: And the Effects they are unable to account for by Reason, they imagine were brought about by the Influence of the *Gods*; for such as well know that the *Gods* lead a Life of Tranquility and Ease, if they should still wonder by what Power the World is carried on, especially in the Things they see over their Heads in the Heavens above, they relapse again into their old Superstition; they raise over themselves a Set of cruel Tyrants, who, the Wretches fancy, can do all Things, because they know nothing of what can or what cannot be, or by what means a finite Power is fixed to every Being, and a Boundary immoveable which it cannot pass. Such are more liable to Mistakes, and to be carried widely from the right Way.

UNLESS you purge your Mind of such Conceits, and banish them your Breast, and forbear to think unworthily of the *Gods*, by charging them with Things that break their Peace, those sacred Deities you will believe are always angry and

Sæpe aderunt ; non quòd violari ſumma Deûm vis
Poſſit, ut ex ira pœnas petere imbibat acreis :
Sed quia Tute tibi placida cum pace quietos
Conſtitues magnos irarum volvere fluctus :
Nec delubra Deûm placido cum pectore adibis :
Nec, de corpore quæ ſancto Simulacra feruntur,
In menteis hominum Divinæ nuntia formæ,
Suſcipere hæc animi tranquilla pace valebis.
Inde videre licet, qualis jam vita ſequatur.
Quam quidem ut à nobis Ratio veriſſima longè
Rejiciat, quanquam ſunt à me multa profata,
Multa tamen reſtant, & ſunt ornanda politis
Verſibus, & ratio Cæli, ſpecieſque tenenda.
Sunt Tempeſtates, & Fulmina clara canenda,
Quid faciant, & qua de cauſa quæque ferantur,
Ne trepides cæli diviſis partibus amens,
Unde volans Ignis pervenerit, aut in utram ſe
Verterit hinc partem : quo pacto per loca ſepta
Inſinuârit, & hinc dominatus ut extulerit ſe :
Quorum operum cauſas nulla ratione videre
Poſſunt, ac fieri Divino numine rentur.
Tu mihi ſupremæ præſcripta ad candida calcis
Currenti ſpatium præmonſtra callida Muſa,
Calliope, requies Hominum, Divûmque voluptas :
Te duce ut inſignem capiam cum laude coronam.

Principio,

and offended with you; not that the Supreme Power of the *Gods* can be ſo ruffled as to be eager to puniſh ſeverely in their Reſentments, but becauſe you fancy thoſe Beings, who enjoy a State of perfect Peace in themſelves, are ſubject to Anger and the Extravagances of Revenge: And therefore you will no more approach their Shrines with an eaſy Mind; no more in Tranquility and Peace will you be able to receive the Images, the Repreſentations of their divine Forms, that flow from their pure Bodies, and ſtrike powerfully upon the Minds of Men: From hence you may collect what a wretched Life you are to lead. That the Rules therefore of right Reaſon may keep theſe Evils at the greateſt Diſtance from us, though I have offered many Things upon this Subject before, yet much ſtill remains to be obſerved, which I ſhall adorn with ſmootheſt Verſe: And firſt, the Nature and Phænomenons of the Heavens muſt be explained.

And now I ſing of Tempeſts, and the flaming Blaſts of Lightning; how they fly, and from what Cauſe they dart through all the Air, leſt, when you view the ſeveral Parts of Heaven, you tremble, and, mad with Superſtition, aſk, whence comes this winged Fire, and to what Quarter of the Heavens does it direct its Courſe; how does it pierce through Walls of Stone, and having ſpent its Rage goes out again? The Cauſes of which Events, ſince Men cannot aſſign by the Laws of Reaſon, they muſt, they ſuppoſe, be effected by the Power of the *Gods*.

And Thou *Calliope*, my ſkilful Muſe, the Joy of Men and Pleaſure of the *Gods*, lead on the Courſe, and guide me to the Goal; that, by thy Conduct, I may gain a Crown, and end the Race with Glory.

Principio, Tonitru quatiuntur cærula cœli,
Propterea quia concurrunt ſublime volantes
Ætheriæ Nubes contra pugnantibu' Ventis.
Nec fit enim ſonitus cœli de parte ſerena,
Verùm ubicunque magis denſo ſunt agmine Nubes,
Tam magis hinc magno fremitus fit murmure ſæpe.
Præterea, neque tam condenſo corpore Nubes
Eſſe queunt, quàm ſunt Lapides, ac Tigna: neque autem
Tam tenues, quàm ſunt Nebulæ, Fumique volantes.
Nam aut cadere abrupto deberent pondere preſſæ,
Ut Lapides: aut, ut Fumus, conſtare nequirent,
Nec cohibere niveis gelidas, & grandinis imbreis.
Dant etiam ſonitum patuli ſuper æquora mundi,
Carbaſus ut quondam magnis intenta theatris
Dat crepitum malos inter jactata, trabeiſque:
Interdum perſciſſa furit petulantibus Euris,
Et fragileis ſonitus chartarum commeditatur,
Id quoque enim genus in Tonitru cognoſcere poſſis,
Aut ubi ſuſpenſam veſtem, chartaſve volanteis
Verberibus venti verſant, planguntque per auras.

Fit

First, [b] The blue Arch of Heaven is shaken with Thunder, because the airy Clouds, flying aloft, are forced by adverse Winds, and strike together; for where the Sky is clear, you hear no Noise; but where the Clouds are thick, and drive in Troops, thence comes the louder Sound and Murmur through the Air. *Of Thunder.*

Besides, the Clouds are not so solid in their Contexture as Stones and Wood, nor so thin as Mists and flying Smoke; for then, depressed by their own Weight, they would either fall abruptly down as Stones, or like Smoke they would disperse, and not be able to keep in the chilling Snow and Showers of Hail.

They [c] give the Crack through the wide Space of Heaven, as Curtains strained upon the Posts and Beams in lofty Theatres, when ruffled by the boisterous Winds and blown to Pieces, they make a rattling Noise like Paper torn. This Thunder, you observe, will sound like Cloaths spread out, or flying Sheets, when tossed by Strokes of Wind they roll and flutter through the Sky.

[b] The Poet begins his Explanation of Meteors; and first of Thunder, the various Motions and Differences of which he resolves several Ways: He says, first, that the Noise of Thunder is made by the Collision of Clouds that are driven and dashed against one another by adverse Winds; and if it be objected that Clouds are rare and thin Bodies, and therefore very improper and unlikely to make so great a Noise, he answers, that the Clouds do not equal Stones and Wood in Density, nor, on the other hand, are so rare as Mist and Smoke, for then indeed they would vanish away; but they are however of a middle Nature, between both, and dense enough to contain Hail and Snow.

[c] He observes, that one single Cloud, driven by the Wind, is sometimes rent asunder by the Violence of the Blast, and makes a Noise like the Rustling of Curtains that are hung at a large Theatre; for the *Roman* Theatres were uncover'd at Top, and, to keep off the Sun or Rain from the Spectators, Curtains were spread over them.

Fit quoque enim interdum, ut non tam concurrere
Nubes
Frontibus adverſis poſſint, quàm de latere ire
Diverſo motu radentes corpori' tractum:
Aridus unde aureis terget ſonus ille diuque
Ducitur, exierit donec regionibus arctis.
Hoc etiam pacto Tonitru concuſſa videntur
Omnia ſæpe gravi tremere, & divolſa repentè
Maxima diſſiluiſſe capacis mœnia mundi,
Cùm ſubitò validi Venti conlecta procella
Nubibus intorſit ſeſe, concluſaque ibidem
Turbine verſanti magis ac magis undique Nubem
Cogit, uti fiat ſpiſſo cava corpore circum.
Poſt ubi commovit vis ejus & impetus acer,
Tum perterricrepo ſonitu dat miſſa fragorem.
Nec mirum, cùm plena animæ Veſicula parva
Sæpe ita dat pariter ſonitum diſploſa repentè.
Eſt etiam ratio, cùm Venti nubila perflant,
Cur ſonitus faciant: etenim ramoſa videmus
Nubila ſæpe modis multis, atque aſpera ferri.
Scilicet ut crebram ſylvam cùm flamina Cauri
Perflant, dant ſonitum frondes, ramique fragorem.
Fit quoque, ut interdum validi vis incita venti
Perſcindat nubem perfringens impete recto.
Nam quid poſſit ibi flatus, manifeſta docet res.
Hîc, ubi lenior eſt, in terra cùm tamen alta
Arbuſta evolvens radicibus haurit ab imis.
Sunt etiam fluctus per nubila, qui quaſi murmur
Dant infringendo graviter: quod item fit in altis
Fluminibus, magnoque mari, cùm frangitur æſtu.

Fit

AND ſometimes the Clouds will not directly meet, and engage Front to Front, but in their different Motions will rudely ſhock the Sides of one another as they paſs. Hence comes that dry craſhing Sound we hear, that laſts for ſome Time, before it breaks its cloſe Priſon and roars out.

ALL Things, you ſee from hence, will ſhake and tremble at the dreadful Clap. And the Heavens (the mighty Walls of this wide World) are torn and burſt aſunder in a Moment, when a collected Force of reſtleſs Wind gets ſuddenly within a Cloud, and there incloſed it rolls furiouſly about, and ſtretches the hollow Space, ſtill more and more, until the Sides grow thick and are condenſed; and when it ſummons its whole Strength, and rages to get free, then comes the frightful Break, it flies abroad with horrid Noiſe; nor is this ſtrange, when a ſmall Bladder full of Wind, will likewiſe give a mighty Crack when it is ſuddenly burſt.

WHEN the Winds ſtrike violently upon the Clouds, this may produce a Noiſe; for we ſee the branched Clouds, with their rough Edges, are driven about in various Manners; as the Blaſts of South Weſt Winds, blowing hard upon the thick Woods, the Boughs give a Sound, and the Branches rattle through the Air.

AND ſometimes the violent Force of a fierce Wind will beat directly, with all its Rage, upon a Cloud, and cut it aſunder. That the Winds will ſhatter the Clouds, is evident by Experience; for here below, where their Power is much weaker, they will overturn the ſtrongeſt Trees, and tear them up by the Roots.

AND then, the Clouds, like Waves, roll about in the wide Ocean of the Air, and cauſe a roaring Noiſe by daſhing together. The ſame happens in large Rivers, and in the wide Sea, when it is

Fit quoque, ubi è nube in nubem vis incidit ardens
Fulminis: hæc multo si fortè humore recepit
Ignem, continuò ut magno clamore trucidet:
Ut calidis candens ferrum è fornacibus olim
Stridit, ubi in gelidum properè demersimus imbrem.
Aridior porro si Nubes accipit ignem,
Uritur ingenti sonitu succensa repente:
Lauricomos ut si per monteis flamma vagetur,
Turbine ventorum comburens impete magno.
Nec res ulla magis, quàm Phœbi Delphica Laurus
Terribili sonitu flamma crepitante crematur.
Denique sæpe Geli multus fragor, atque ruina
Grandinis, in magnis sonitum dat Nubibus altè.
Ventus enim cùm confercit, franguntur in arctum
Concreti montes nimborum, & grandine misti.
Fulgit item, Nubes ignis cùm semina multa
Excussere suo concursu, seu Lapidem si
Percutiat Lapis, aut Ferrum, nam tum quoque lumen
Exsilit, & claras scintillas dissupat ignis.
Sed Tonitrum fit uti post auribus accipiamus,
Fulgere quàm cernant oculi, quia semper ad aureis

Tardiùs

broken and rages with the Tide. And ſometimes [d] the fiery Force of Lightning falls from one Cloud into another: If a Cloud full of Moiſture receives this Fire, it extinguiſhes it with a great Noiſe; as a red-hot Iron, juſt taken out of the glowing Heat, hiſſes when we plunge it haſtily into cold Water: But if a dry Cloud receives the Flame, it takes fire inſtantly, and rattles in the Air; as when a Fire, raging with mighty Force, is driven by ruſhing Winds upon a Hill cover'd with Laurels, and ſets all in a Blaze; for nothing burns with a more dreadful Noiſe and crackling Flame, than the Leaves of the *Delphick* Laurel, ſacred to *Apollo*. And laſtly, Pieces of Ice and Showers of Hail, incloſed in mighty Clouds, will often ſound like Thunder; for when the Winds have driven and preſſed them cloſe, theſe mountainous Clouds, being condenſed, will burſt and diſcharge their Weight of Ice and Hail.

Lightning.

It [e] lightens when the Clouds, by violent Strokes in meeting, beat out many Seeds of Fire, and ſtrike as Flint and Steel, or Stone and Stone; for then the Light leaps out, and ſcatters ſhining Sparks of Fire.

Why the Light is ſeen before we hear the Thunder.

But we never hear the Thunderclap till we have ſeen the Lightning; for the Images of Things approach our [f] Ears much ſlower than

[d] He ſays, that Lightning falling from a dry Cloud into a Wet, hiſſes like red-hot Iron when plunged into the Smithy. This was particularly the Opinion of *Anaxagoras*.

[e] Lightning may be ſtruck out of harden'd Clouds, daſh'd againſt one another, as Fire is out of Iron, Flint, or Wood; for we are to ſuppoſe, that ſome Seeds of Fire are lurking in the Clouds, as well as in thoſe other Things.

[f] The Reaſon is, becauſe the *Materia Subtilis* in lucid Bodies, which is the Medium by which we ſee, conſiſts of Particles that are much leſs, and more ſolid, than thoſe of the Air, the Medium by which we hear; and conſequently the Motion of that ſubtle Matter is more quick than that of the Air, becauſe more Strength is requiſite to overcome the Reſiſtance of a greater Body than that of a leſs.

Tardiùs adveniunt, quàm viſum quæ moveant res.
Id licet hinc etiam cognoſcere: cædere ſiquem
Ancipiti videas ferro procul arboris auctum,
Antè fit ut cernas ictum, quàm plaga per aureis
Det ſonitum: ſic Fulgorem quoque cernimus antè
Quàm Tonitrum accipimus, pariter qui mittitur igni,
E ſimili cauſa, & concurſu natus eodem:
Hoc etiam pacto volucri loca lumine tingunt
Nubes, & tremulo tempeſtas impete fulgit.
Ventus ubi invaſit Nubem, & verſatus ibidem
Fecit, ut antè, cavam, docui, ſpiſſeſcere Nubem,
Mobilitate ſua ferviſcit; ut omnia motu
Percalefacta vides ardeſcere: plumbea verò
Glans etiam longo curſu volvenda liqueſcit.
Ergo fervidus Hic Nubem cùm perſcidit atram,
Diſſupat ardoris quaſi per vim expreſſa repente
Semina, quæ faciunt nictantia fulgura flammæ:
Inde Sonus ſequitur, qui tardiùs adlicit aureis,
Quàm quæ perveniunt oculos ad lumina noſtros.
Scilicet hoc denſis fit nubibus, & ſimul altè
Exſtructis aliis alias ſuper impete miro.
Nec tibi ſit fraudi, quòd nos inferne videmus
Quàm ſint lata magis, quàm ſurſum exſtructa quid extent;
Contemplator enim cùm montibus adſimilata
Nubila portabunt Venti tranſverſa per auras:
Aut ubi per magnos monteis cumulata videbis
Inſuper eſſe aliis alia, atque urgere ſuperna
In ſtatione locata ſepultis undique ventis:
Tum poteris magnas moleis cognoſcere eorum,

Spe-

they reach our Eyes. This you prove, when you obſerve a Fellow at a Diſtance is cutting down a Tree, you ſee the Blow before you hear the Stroke: And ſo we ſee the Lightning before we hear the Thunder, though the Noiſe and the Flame fly out together, and proceed from the ſame Cauſe, the ſame Shock and Burſting of the Clouds.

AND ſo [g] the Clouds will blaze with winged Fire, and Tempeſts will ſhine bright with trembling Flame, when the Winds get within a Cloud, and roll about, and make it hollow (as I ſaid before) till it grows condenſed, and then by Motion kindles and breaks out into a Flame; for Things made hot by Motion, we ſee, will fall on fire, and leaden Bullets, in a long Courſe through the Air, have melted as they fled: Therefore this fiery Wind, when it has burſt the Sides of this dark Cloud, forces and inſtantly ſcatters many Seeds of Fire, which makes the ſudden Flaſh of Lightning all abroad. Then comes the Noiſe that ſlowly moves the Ear, and later than the Lightning ſtrikes our Sight. This happens when the Clouds are thick, and roll on Heaps, one Pile above another, with wondrous Swiftneſs through the Air.

Thick Clouds.

NOR muſt you think this falſe, becauſe the Clouds, to us that ſtand below, ſeem rather broad than deep, or raiſed on Heaps; for ſee how the Winds will whirl along the Air theſe rolling Clouds, raiſed Mountain-high; and on the Mountain-Tops the Clouds, obſerve, are higher ſome than others, and piled on Heaps; and, when the Winds are ſtill, the higher Row will preſs the Lower down: Then you may judge of their prodigious Weight, and

[g] As Thunder is cauſed by the Winds breaking and tearing the Clouds, ſo Lightning is made by the ſame Winds, that by the Swiftneſs of their Motion grow hot, and kindle into Flames, as they are agitated and whirled about in the Bowels of the Clouds.

view

Speluncaſque velut ſaxis pendentibu' ſtructas
Cernere, quas Venti cùm, tempeſtate coorta,
Complerunt, magno indignantur murmure clauſi
Nubibus, in caveiſque ferarum more minantur:
Nunc hinc, nunc illinc fremitus per Nubila mittunt:
Quærenteſque viam circumverſantur, & ignis
Semina convolvunt è Nubibus: atque ita cogunt
Multa, rotantque cavis flammam fornacibus intùs,
Donec divolſa fulſerunt nube coruſci.

Hac etiam fit uti de cauſa mobilis ille
Devolet in terram liquidi color aureus ignis,
Semina quòd Nubeis ipſas permulta neceſſe 'ſt
Ignis habere: etenim cùm ſunt humore ſine ullo,
Flammeus eſt plerumque colos & ſplendidus ollis.
Quippe etenim Solis de lumine multa neceſſe 'ſt
Concipere, ut meritò rubeant, igneiſque profundant.
Haſce igitur cùm Ventus agens contruſit in unum
Compreſſitque locum cogens: expreſſa profundunt
Semina, quæ faciunt flammæ fulgere colores.

Fulgit item, cùm rareſcunt quoque Nubila cæli.
Nam cùm Ventus eas leviter diducit eunteis,
Diſſolvitque, cadant ingratis illa neceſſe 'ſt
Semina, quæ faciunt fulgorem: tum ſine tetro
Terrore, & Sonitu fulgit, nulloque tumultu.

Quod

view their hollow Caverns, form'd as it were in hanging Rocks, where in a Tempeſt the rough Winds are ſhut, and ſcorn to be confined, and roar with horrid Noiſe, like ſavage Beaſts within their Dens chain'd down. They grumble here and there, on every Side, within the Clouds, and ſtriving to get free, roll every way about, and as they move collect the fiery Seeds in great Abundance, and in the heated Caverns toſs them about, until the Clouds burſt, and then they flaſh in ſhining Flame.

And for this Reaſon, perhaps, the Lightning (that ſwift and golden Stream of pureſt Fire) flies down upon the Earth, becauſe the Clouds muſt needs contain within themſelves Plenty of fiery Seeds; and ſuch as are without all Moiſture, look bright and of a fiery Colour; for they muſt receive many fiery Particles from the Sun, and therefore cannot but look red, and ſend out Flame. Theſe, when the Force of Winds have preſſed and driven into a narrow Space, the fiery Seeds, being ſqueezed, fly out, and make that glaring Flame to ſhine abroad.

Or [h] it lightens, becauſe the Clouds above are rarefied; for when the Winds blow on them as they paſs, and gently ſtretch them out, and wear them thin, the Seeds of Fire that make the Light muſt needs fall out; but then it ſhines without much Noiſe and Terror, and cauſes no Confuſion in the Sky.

[h] He ſaid before, that the Seeds of Fire that are in the Clouds, are driven out by the Strength and Violence of the Wind; but now obſerves, that if they are not driven out in that manner, yet they muſt of neceſſity fall down when the Clouds grow thin, and break and open of themſelves: And that from thence proceeds the mild and gentle Lightning, whoſe Splendor dazzles the Eyes, though no Thunder invade the Ear.

Now

Quod supereſt, quali natura prædita conſtent
Fulmina, declarant ictus, & inuſta vapore
Signa, notæque graveis halantes Sulfuris auras.
Ignis enim ſunt hæc, non Venti ſigna, neque Imbris.
Præterea, per ſe accendunt quoque tecta domorum,
Et celeri flamma dominantur in ædibus ipſis.
Hunc tibi ſubtilem cùm primis ignibus ignem
Conſtituit natura minutis, mobilibuſque
Corporibus, cui nil omninò obſiſtere poſſit.
Tranſit enim validè Fulmen per ſepta domorum,
Clamor uti, ac Voces: tranſit per ſaxa, per æra:
Et liquidum puncto facit æs in tempore, & aurum.
Curat item ut vaſis integris Vina repente
Diffugiant, quia nimirum facilè omnia circum
Conlaxat, rareque facit lateramina vaſis,
Adveniens calor ejus ut inſinuatur in ipſum: &
Mobiliter ſolvens differt primordia Vini:
Quod Solis vapor ætatem non poſſe videtur
Efficere, uſqueadeo pollens fervore coruſco:
Tanto mobilior vis, & dominantior hæc eſt.

Nunc ea quo pacto gignantur, & impete tanto
Fiant, ut poſſint ictu diſcludere Turreis,
Diſturbare domos, avellere tigna, trabeiſque,
Et Monumenta virûm demoliri, atque ciere,
Exanimare Homines, Pecudes proſternere paſſim:
Cætera de genere hoc qua vi facere omnia poſſint,
Expediam, neque Te in promiſſis plura morabor.

Fulmina

Now of what Seeds the [i] Lightning is compoſed, its Strokes will ſhew, and Marks of Fire it leaves behind, and Steams of ſtinking Sulphur in the Air; for theſe are Signs of Fire, not Wind or Rain; for Lightning will ſet on fire whole Towns, and with ſwift Flames conſume the Houſes to the Ground. Nature has formed this ſubtle Fire of Seeds of Heat the moſt minute, and Particles moſt apt to move, which nothing can reſiſt. It paſſes forcibly through the Walls, as Voice and Sound. It flies through Stones and Braſs, and in a Moment melts both Braſs and Gold. It has ſtrange Power to draw the Liquor out, and leave the Veſſel whole: This it does by looſening the Contexture of the Caſk, and by widening its Pores every way, that ſo its Heat may more eaſily find a Paſſage through; and then, by the Swiftneſs of its Motion, it diſſolves the Body of the Liquor, ſcatters its Seeds, and forces it out: And this the Heat of the Sun is not able to do in an Age; ſo much ſtronger is the Force of this bright Flame, its Motion more ſwift, and its Power more irreſiſtible.

The Strength of Thunder.

BUT how theſe Fires are formed, and how they rage with ſo great Force, as by their Strokes to beat down Towers, to overturn Houſes, to tear up Poſts and Beams, to ſhake and tumble down Monuments of Stone, to ſtrike Men dead, and kill whole Herds at once; by what Power they cauſe ſuch Scenes of Ruin, This I ſhall now explain, as I promiſed, and keep you no longer in Suſpenſe.

[i] Having treated of the Coruſcation of Lightning, which the *Latins* called *Fulgur*, he is now going to diſpute concerning the *Fulmen*, by which the Ancients meant the Lightning that falls and does Miſchief upon the Earth, commonly called the *Thunderbolt*. The Poet ſpeaks confuſedly upon this Occaſion, and often uſes the one for the other.

Fulmina gignier è craſſis, altèque putandum'ſt
Nubibus exſtructis : nam cœlo nulla ſereno,
Nec leviter denſis mittuntur nubibus unquam.
Nam dubio procul hoc fieri manifeſta docet res,
Quòd tunc per totum concreſcunt Aëra nubes
Undique, uti tenebras omneis Acherunta reamur
Liquiſſe, & magnas cœli complêſſe cavernas :
Uſqueadeo tetra nimborum nocte coorta
Impendent atræ formidinis ora ſuperne,
Cùm commoliri tempeſtas Fulmina cœptat.
Præterea, perſæpe niger quoque per mare Nimbus,
Ut picis è cœlo demiſſum flumen, in undas
Sic cadit, & fertur tenebris procul, & trahit atram
Fulminibus gravidam tempeſtatem, atque procellis,
Ignibus, ac ventis cumprimis ipſe repletus :
In terra quoque ut horreſcant, ac tecta requirant.
Sic igitur ſupera noſtrum caput eſſe putandum'ſt
Tempeſtatem altam : neque enim caligine tanta
Obruerent terras, niſi inædificata ſuperne
Multa forent multis exemto Nubila ſole :
Nec tanto poſſent hæc terras opprimere imbri,
Flumina abundare ut facerent, campoſque natare,
Si non exſtructis foret altè Nubibus æther.
His igitur Ventis, atque Ignibus omnia plena
Sunt ; ideo paſſim fremitus, & fulgura fiunt :
Quippe etenim ſuperà docui, permulta vaporis
Semina habere cavas nubeis : & multa neceſſe'ſt
Concipere ex Solis radiis, ardoreque eorum.
Hìc ubi Ventus eas idem qui cogit in unum
Fortè locum quemvis, expreſſit multa vaporis
Semina, ſeque ſimul cum eo commiſcuit igni :
Inſinuatus ibi Vortex verſatur in alto,
Et calidis acuit Fulmen fornacibus intùs.

Nam

You are to obſerve then, that Thunder is produced from thick Clouds, raiſed high one above another in the Air; for the Thunder never roars in a clear Sky, nor is diſcharged from Clouds that are not thick and condenſed; and this is evident from common Obſervation. The Clouds thicken every way over all the Heavens, as if the whole Maſs of Darkneſs had left the Shades of Hell, and filled the ſpacious Hollows of the Sky; and this dark Heap of Clouds ſpreads a dreadful Night over our Heads, and makes us tremble here below. Theſe are the Signs when a Tempeſt is forging Thunder in the Air.

Besides, a black Cloud is often obſerved at Sea, below the dark Regions of the Clouds, that falls from the Sky like a Stream of flowing Pitch into the Water; and being full of Fire and Wind, draws a black Tempeſt with it, loaded with Storms and Thunder; ſo that thoſe at Land tremble, and fly for Shelter to their Houſes. Thoſe Clouds then, you muſt think, are high above our Heads: They could not overwhelm the Earth with ſo much Darkneſs, were they not raiſed on Heaps above, and driven between Us and the Sun's Light; nor could they load the Earth with ſo great Showers, and make the Rivers ſwell and drown the Plains, unleſs the Clouds were raiſed on Heaps in the upper Regions of the Air.

These Clouds are fully charged with Wind and Fire, and thence the Lightnings flaſh and Thunders roar; for, as I ſaid above, theſe hollow Clouds are full of fiery Seeds, and many they receive from the Sun's Rays, and borrow from their Heat: And when the Wind compels them to retreat to cloſer Room, it drives out many Seeds of Fire, and mingles with the Flame. Then the loud Tempeſt rolls along the Sky, and in its heated Entrails forms and points the Thunder.

Nam duplici ratione accenditur, Ipſe ſua nam
Mobilitate caleſcit, & è contagibus ignis.
Inde ubi percaluit vis Venti, vel gravis Ignis,
Impetus inceſſit: maturum tum quaſi Fulmen
Perſcindit ſubitò Nubem, ferturque coruſcis
Omnia luminibus luſtrans loca percitus ardor:
Quem gravis inſequitur Sonitus, diſploſa repente
Opprimere ut cœli videantur templa ſuperne.
Inde tremor Terras graviter pertentat, & altum
Murmura percurrunt cœlum: nam tota fere tum
Tempeſtas concuſſa tremit, fremituſque moventur:
Quo de concuſſu ſequitur gravis Imber, & uber,
Omnis uti videatur in Imbrem vertier Æther,
Atque ita præcipitans ad diluviem revocare:
Tantus diſcidio nubis, ventique procella,
Mittitur ardenti Sonitus cùm provolat ictu.
Eſt etiam cùm vis extrinſecùs incita Venti
Incidit in validam maturo fulmine Nubem:
Quam cùm perſcidit, extemplo cadit igneus ille
Vortex, quod patrio vocitamus nomine Fulmen.
Hoc fit idem in parteis alias, quocunque tulit vis.
Fit quoque ut interdum Venti vis miſſa ſine igni,
Igneſcat tamen in ſpatio, longoque meatu,
Dum venit, amittens in curſu corpora quædam
Grandia; quæ nequeunt pariter penetrare per auras:
Atque alia ex ipſo conradens Aëre portat
Parvula, quæ faciunt ignem commiſta volando:
Non alia longè ratione, ac plumbea ſæpe
Fervida fit Glans in curſu, cùm multa rigoris
Corpora dimittens ignem concepit in auris.

Fit

der. This Wind is set on fire, either by the Rapidity of its own Motion, or catches from the fiery Seeds within the Cloud; and when it is raging hot, and in a Flame, it collects all its Fury, and then the ripen'd Thunder instantly splits and bursts the Cloud. The fiery Tempest blazes all abroad with Darts of flashing Light, followed by frightful Noise, as if the Temples of the *Gods* above were rent asunder. The Earth below trembles dreadfully at the Shock, and the loud Murmurs scour through all the Heavens; for the whole Tempest shakes, and roars aloud. Then grievous Showers in great Abundance follow the Concussion, as if the Skies were all dissolved in Rain, and poured down Inundations from above. So dreadful is the Clap that flies abroad with red-hot Lightning, when the Clouds burst, and Storms of fiery Wind rage through the Air.

OR else, [k] the Lightning flies when, from without, a furious Wind beats hard upon a Cloud, replete with Thunder ripe for Birth; which, when it bursts the fiery *Vortex*, falls (we in our Language call it *Thunder*) and makes its way where the Strokes most prevailed.

SOMETIMES a furious Wind will burst the Cloud before 'tis set on fire, but kindles as it flies in its long Passage through the Air; for in its Course it throws off the heavy Seeds that lay behind, and could not make their Way; and brush-ed and carried off other small Seeds from the Air, which join and fall on fire as they fly: Just as a Ball of Lead melts in its Course, and throwing off the cold and stubborn Seeds, takes fire and softens in the Air.

[k] If the Wind that is pent up in the Cloud cannot break through, it may be assisted by other Winds from without; and by whatever means the Cloud be opened, the Flame that is ripe for Birth will necessarily fall down.

Fit quoque, ut ipsius Plagæ vis excitet ignem,
Frigida cùm Venti pepulit vis missa sine igni :
Nimirum quia cùm vehementi perculit ictu,
Confluere ex ipso possunt elementa Vaporis ;
Et simul ex illa, quæ tum res excipit ictum,
Ut lapidem ferro cùm cædimus, evolat Ignis :
Nec quòd frigida vis sit ferri, hoc secius illa
Semina concurrunt calidi fulgoris ad ictum :
Sic igitur quoque res accendi Fulmine debet,
Opportuna fuit si fortè, & idonea flammis.
Nec temerè omnino planè vis frigida Venti
Esse potest, ex quo tanta vi immissa superne'st :
Quin priùs in cursu si non accenditur igni,
At tepefacta tamen veniat commista calore.
Mobilitas autem fit Fulminis, & gravis ictus,
Et celeri ferme pergunt sic Fulmina lapsu :
Nubibus ipsa quòd omnino priùs incita se Vis
Conligit, & magnum conamen sumit eundi.
Inde, ubi non potuit Nubes capere impetis auctum,
Exprimitur vis, atque ideo volat impete miro,
Ut validis quæ de Tormentis missa feruntur.
Adde quod e parvis, ac levibus est elementis :
Nec facile'st tali naturæ obsistere quicquam :
Inter enim fugit, ac penetrat per rara viarum.
Non igitur multis offensibus in remorando
Hæsitat : hanc ob rem celeri volat impete labens.

Deinde,

AND the Fury of the [1] Stroke, perhaps, may raiſe a Fire, when the Force of a cold Wind, unkindled, beats hard with all its Power; for then the Seeds of Fire may flow together upon the Violence of the Stroke, not only from the Wind, but from the Thing it ſtrikes; as when we ſtrike the Flint with Steel, the Fire flies out; and though the Iron be by Nature cold, yet when it feels the Blow the hot Seeds of Fire will ſpread abroad: And thus, whatever the Lightning falls upon may eaſily be ſet on fire, if it be in its Nature fit and diſpoſed to burn. Nor can the Wind be ſuppoſed to be perfectly cold, ſince it is diſcharged from above with ſo much Violence; and if it be not inflamed as it drives through the Air, yet it muſt have ſome Degree of Heat when it comes to the Earth.

THE Swiftneſs and heavy Stroke of the Thunder, and the Violence of its Fall, proceed from hence. The Wind, ſhut up within a Cloud, rages in all its Strength, and ſtruggles hard to get free; and when the Cloud can no longer bear the Fury of its Efforts, it breaks out and flies abroad with mighty Force, as Stones and Darts from mighty Engines thrown.

BESIDES, the Thunder is formed of ſmall and ſmooth Seeds, ſo ſubtle, that nothing can withſtand its Force; it gets between and pierces through the ſmalleſt Pores; it meets with nothing that can divert its Paſſage, and therefore flies abroad with the ſwifteſt Motion.

[1] If the Wind beats furiouſly upon any thing, the Seeds of Fire may flow together upon the Stroke, as well out of the Wind as out of the Thing it ſtrikes; thus the Wind takes fire, and Lightning is made. But that ſuch a Confluxion of the Seeds of Fire may be made in that manner, is evident from the Striking of Flint and Iron. And the Objection of the Winds being cold (though even that can by no means be granted, by reaſon of the Swiftneſs of their Motion) is of no Weight; for the Nature of Iron is full as cold, yet Fire will ſparkle out when we ſtrike it.

Deinde, quod omnino natura Ponderа deorſum
Omnia nituntur: cùm plaga ſit addita verò,
Mobilitas duplicatur, & impetus ille graveſcit:
Ut vehementiùs, & citiùs, quæcunque morantur
Obvia, diſcutiat plagis, itinerque ſequatur.
Denique, quod longo venit impete, ſumere debet
Mobilitatem, etiam atque etiam quæ creſcit eundo,
Et validas auget vireis, & roborat ictum.
Nam facit, ut, quæ ſint illius Semina cunque,
E regione locum quaſi in unum cuncta ferantur,
Omnia conjiciens in eum volventia curſum.
Forſan & ex ipſo veniens trahat Aëre quædam
Corpora, quæ plagis intendunt mobilitatem.
Incolumeiſque venit per res, atque integra tranſit
Multa, foraminibus liquidis quia travolat Ignis.
Multaque perfringit, cùm corpora Fulminis ipſa
Corporibus rerum inciderint, quà texta tenentur.
Diſſolvunt porro facilè Æs, Aurumque repente
Confervefacit; è parvis quia facta minutè
Corporibus vis eſt, & lævibus ex elementis,
Quæ facile inſinuantur, & inſinuata repente
Diſſolvunt nodos omneis, & vincla relaxant.
Autumnoque magis ſtellis fulgentibus alta
Concutitur Cæli domus undique, totaque Tellus;
Et cùm tempora ſe Veris florentia pandunt.
Frigora enim deſunt Ignes, Ventique Calore
Deficiunt, neque ſunt tam denſo corpore Nubes.
Inter utrumque igitur cùm Cæli tempora conſtant,
Tum variæ cauſæ concurrunt Fulminis omnes.

Nam

And then, ſince all Bodies of Weight naturally deſcend, when Blows or outward Force is added to their innate Gravity, their Motion doubles, and the Violence of the Strokes drive them downwards with the greater Speed, and conſequently they beat through every thing that obſtructs their Motion much ſooner, and with more Vehemence perſue their Courſe.

And, laſtly, the greater the Diſtance is from whence a Body deſcends, its Swiftneſs in proportion increaſes; it ſtill gathers Strength as it moves, grows more violent, and the Blow is the heavier when it falls; for all its Seeds are driven down by that Length of Violence to one Point, and unite all their Powers in the ſame Motion; or perhaps they carry with them other Seeds in their Paſſage through the Air, which beat them on, and keep them ſteady in their Deſcent.

The Lightning makes its Way and paſſes through Bodies that are Rare, and leaves them ſafe and unhurt; but other Bodies it rends aſunder, becauſe its fiery Seeds ſtrike through their ſolid Corpuſcles which hold them together: And therefore it eaſily diſſolves Braſs and Gold, becauſe it conſiſts of exceeding ſmall and ſmooth Particles, which work themſelves without Difficulty into the very Principles, and in an inſtant melt the whole Contexture, and looſen the Ties and Bonds by which they were ſecured.

And in Autumn, and when the flowery Seaſon of the Spring diſplays its Beauty, then the high Palaces of Heaven with all its ſhining Stars, and the whole Earth, are ſhaken moſt with Thunder; for in the Winter there wants Fire, and in Summer there is no Supply of Wind, nor will the Clouds grow thick in too much Heat: But in the middle Quarters of the Year, all Things concur to make the Thunder roar. Thoſe Seaſons

Nam fretus ipſe anni permiſcet Frigus, & Æſtum :
Quorum utrumque opus eſt fabricanda ad Fulmina nobis,
Ut diſcordia ſit rerum, magnoque tumultu
Ignibus, & Ventis furibundus fluctuet Aër.
Prima Caloris enim pars, & poſtrema Rigoris,
Tempus id eſt Vernum : quare pugnare neceſſe 'ſt
Diſſimiles inter ſe res, turbareque miſtas.
Et Calor extremus primo cum Frigore miſtus
Volvitur, Autumni quod fertur nomine tempus.
Hîc quoque confligunt Hiemes Æſtatibus acres.
Propterea ſunt hæc Bella anni nominitanda :
Nec mirum 'ſt in eo ſi tempore plurima fiunt
Fulmina, tempeſtaſque cietur turbida cælo,
Ancipiti quoniam bello turbatur utrinque,
Hinc Flammis, illinc Ventis, Humoreque miſto.
Hoc eſt igniferi naturam Fulminis ipſam
Perſpicere, & qua vi faciat rem quamque videre :
Non Tyrrhena retrò volventem carmina fruſtra
Indicia occultæ Divûm perquirere mentis,
Unde volans Ignis pervenerit, aut in utram ſe
Verterit hic partem, quo pacto per loca ſepta
Inſinuârit, & hinc dominatus ut extulerit ſe,
Quidve noſcere queat de cælo fulminis ictus.
Quòd ſi Jupiter atque alii fulgentia divi
Terrifico quatiunt ſonitu cœleſtia templa,
Et jaciunt igneis, quo cuique 'ſt cumque voluptas,
Cur, quibus incautum ſcelus averſabile cumque 'ſt,
Non faciunt, icti flammas ut Fulguris halent
Pectore perfixo, documen mortalibus acre ?

Et

are made up of Heat and Cold blended together; of both these is formed the Thunder; that so these jarring Elements may raise the greater Combustions, and the tormented Air toss with more Confusion by the Strokes of Wind and Fire; for the End of Winter and the Beginning of Summer make the Spring: And then the Heat and Cold, two Enemies so opposite, must needs engage, and when they meet and mix, raise strange Confusions in the Air: And then the End of Summer and the Beginning of Winter bring on the Autumn; now the retiring Heat and coming Cold engage again. These are the Times, we say, when the Elements go forth to war. Where is the Wonder, if loud Thunders roar in Seasons such as these, and dreadful Tempests rattle in the Sky, since the Elements rage every way with doubtful War, on one side Fire, on the other furious Winds with mingled Rain?

FROM hence you must collect the true Principles of Thunder, and discover how it works and sends abroad its Fires; [m] for 'tis in vain to look back into old *Tuscan* Legends, and from thence inquire into the secret Purposes of the *Gods*, from what Quarter of the Heavens the Lightning flies, and to what Part it points its forked Beams, and how it pierces through the Walls of Houses, and having spent its Rage it finds a Passage out, and what Evil it portends by flashing from the Sky.

FOR if Great *Jupiter*, and the rest of the *Gods*, delight to shake the shining Battlements of Heaven with horrid Noise, and throw about these Fires as please themselves, why are not those shot through who love to act flagitious Crimes, and why their Hearts not struck with fiery Bolts, as dreadful Monuments

[m] Here the Poet insults the College of Augurs and Soothsayers of *Rome*, who, from the *Tuscans*, pretended to teach Divination as if it had been a Science.

Et potiùs nullæ sibi turpis consciu' rei
Volvitur in flammis innoxius, inque peditur,
Turbine cœlesti subitò conreptus & igni?
Cur etiam loca sola petunt, fruſtaque laborant?
An con brachia suefaciunt, firmantque lacertos;
In terraque Patris cur telum perpetiuntur
Obtundi? cur Ipse sinit, neque parcit in hosteis?
Denique, cur nunquam cælo jacit undique puro
Jupiter in terras Fulmen, sonituſque profundit?
An simul ac Nubes succeſſere, Ipse in eas tum
Descendit, propè ut hinc teli determinet ictus?
In Mare qua porro mittit ratione? quid undas
Arguit, & liquidam molem, camposque natantes?
Præterea, si vult caveamus Fulminis ictum,
Cur dubitat facere, ut possimus cernere missum?
Si nec-opinanteis autem vult opprimere igni,
Cur tonat ex illa parte, ut vitare queamus?
Cur tenebras antè, & fremitus, & murmura concit?
Et simul in multas parteis quî credere possis
Mittere? an hoc ausis nunquam contendere factum,
Ut fierent ictus uno sub tempore plures?
At sæpe'st numero factum, fierique neceſſe'st,
Ut pluere in multis regionibus, & cadere Imbreis,
Fulmina sic uno fieri sub tempore multa.

Postremò,

to future Times? Why rather are the Good and Innocent ſcorched with theſe Blaſts, and tortured in the Flames, and caught up in theſe Whirlwinds of the Air, and in the Fire conſumed?

And why do They ſpend their Shafts on ſolitary Places, and fatigue themſelves in vain? Is it to exerciſe their Arms, to try their Strength? Or why do they permit their Father's Bolts to be blunted againſt the bare Earth? Why does He ſuffer this himſelf, and not rather reſerve his Stores to blaſt his Enemies? Why does not *Jove* vouchſafe to roar with Thunder, and ſmite the Earth with his Bolts in a clear Sky? When the Clouds ſpread over the Heavens, does he deſcend within them, in order to be nearer, and to throw his Darts with a ſurer Aim? Why does he ſend his Fires upon the Sea? Why does he chaſtiſe the Waves, the wide Ocean, or the Plains cover'd with Water?

Besides, if He would have us avoid the Stroke of his Thunderbolts, why does not he contrive that we may ſee them as they fly? If He reſolves to blaſt us with his Fire before we are aware, why does he firſt flaſh out his Lightning from that Quarter whence his Bolts are to be diſcharged, that we may avoid them? Why does he give us Notice, by raiſing Darkneſs, Noiſes, and Murmurs in the Air?

And then, how think you he is able to caſt ſo many Darts in many various Places at once? Will you offer to ſay this is never done, and inſiſt there are never more Darts than One flying about at the ſame Time? It is certain that Numbers of them are thrown together, and it cannot be otherwiſe; for as the Rain and the Showers fall upon many Countries at once, ſo many Strokes of Thunder are diſcharged at the ſame Time.

Poſtremò, cur ſancta Deûm delubra, ſuaſque
Diſcutit infeſto præclaras Fulmine ſedes:
Et bene facta Deûm frangit ſimulacra? ſuiſque
Demit imaginibus violento volnere honorem?
Altaque cur plerumque petit loca? plurimaque hujus
Montibus in ſummis veſtigia cernimus Ignis?
Quod ſupereſt, facile'ſt ex his cognoſcere rebus,
Πρηστήρας *Graii quos ab re nominitârunt,*
In mare qua miſſi veniant ratione ſupernè.
Nam fit, ut interdum tanquam demiſſa columna
In mare de cælo deſcendat, quam Freta circum
Ferviſcunt graviter ſpirantibus incita flabris:
Et quæcunque in eo tum ſunt deprenſa tumultu
Navigia, in ſummum veniunt vexata periclum.
Hoc fit, ubi interdum non quit vis incita Venti
Rumpere, quam cæpit nubem; ſed deprimit, ut ſit
In mare de cælo tanquam demiſſa columna.
Paullatim, quaſi quid pugno, brachiique ſupernè
Conjectu trudatur, & extendatur in undas:
Quam cùm diſcidit, hinc prorumpitur in mare Venti
Vis, & fervorem mirum concinnat in undis.
Verſabundus enim Turbo deſcendit, & illam
Deducit pariter lento cum corpore nubem.

IN the laſt place: Why does He with his deadly Thunder beat down the ſacred Temples of the other *Gods*, and the ſtately Fabricks devoted to Himſelf? Why does he daſh to Pieces the curious Statues of the other Deities, and deſtroy with furious Strokes the Honours offered to his own Images? Why does he level his Shafts at lofty Places, for we diſcover many Traces of this Fire upon the Tops of higheſt Mountains?

IT is eaſy, from what has been obſerved, to apprehend the Cauſe of thoſe Whirlwinds (which the *Greeks*, from the Nature of the Thing, juſtly call [n] *Præſters)* and how they deſcend from above, and fall into the Sea. They are ſometimes ſeen to deſcend from the Air into the Water like a Pillar; and the Sea, raging about with violent Blaſts of Wind, ſeems to boil, and is exceedingly toſſed; and whatever Ships are caught within the Reach of the Hurricane, are in the utmoſt Danger of being caſt away. This happens when the Force of the Wind, impetuouſly whirling within the Cloud, is not able to break it, but drives it on, ſo that it falls like a Column let down into the Sea. This Deſcent is gradual, as if it was thruſt by ſome Hand or Arm, and ſpread over the Waters. When the Cloud burſts, the Fury of the Wind breaks out among the Waves, and violently whirling round takes fire, and raiſes a wonderful Heat and Fermentation in the Waters; for a rolling Whirlwind deſcends with the Cloud, which being ſlow in its Motion, it bears along with it through

[n] A *Præſter* (he obſerves) is a Wind impetuouſly whirled about, and that takes fire by the Continuance and Vehemence of the Agitation: If this Wind burſt out of the Clouds, and move violently in a ſtraight Line, it kindles into Lightning only; but if the Cloud be ſo tough that it cannot break through, but bears it down into the Sea, and there impetuouſly whirling round in the Waves at length takes fire, it becomes a *Præſter*, the ſure Deſtruction of Sailors.

the

Quam simul ac gravidam detrusit ad æquora Ponti,
Ille in aquam subitò totum se immittit, & omne
Excitat ingenti sonitu Mare fervere cogens.
Fit quoque, ut involvat venti se nubibus ipse
Vortex, conradens ex Aëre semina nubis,
Et quasi demissum cælo Præstéra imitetur.
Hic ubi se in terras demisit, dissolvitque:
Turbinis immanem vim promovit, atque procellæ.
Sed quia fit rarò omninò, montesque necesse 'st
Officere in Terris: appâret crebriùs idem
Prospectu Maris in magno, cæloque patenti.
Nubila concrescunt, ubi corpora multa volando
Hoc super in Cœli spatio coïre repente
Asperiora, modis quæ possint indupedita
Exiguis, tamen inter se comprensa teneri.
Hæc faciunt primùm parvas consistere Nubeis;
Inde ea comprendunt inter se, conque gregantur,
Et conjungendo crescunt, ventisque feruntur
Usqueadeo, donec Tempestas sæva coorta 'st.
Fit quoque uti Montis vicina cacumina cælo
Quàm sint quæque magis, tantò magis edita fument
Assiduè fulvæ Nubis caligine crassa;
Propterea, quia cùm consistunt Nubila primùm,

Ante

the Air; and when it has thruſt the heavy Body of the Cloud into the Sea, it plunges furiouſly with it into the Water, and with a dreadful Noiſe ſets all the Element in a Blaze.

IT ſometimes happens that a Whirlwind, as it paſſes through the Air, will ſcrape off ſome Seeds from the Bodies of the Clouds; and rolling itſelf within, will look like a *Præſter* deſcending from above into the Sea. When this *Vortex* of Wind falls upon the Earth, it burſts out without being kindled into Flame; it whirls with mighty Force, and raiſes a Tempeſt, and bears down every thing before it. This ſort of Whirlwind is not common at Land; for the high Hills hinder its Deſcent, and break its Force; but it appears frequently in the wide Sea, and in the open Air.

NOW for the Origin of [o] Clouds: Theſe are formed when certain rough and hooked Seeds, as they fly about, at length unite in the higher Region of the Air that is above us; but are held together looſely, and not bound in any cloſe and ſtrict Embrace. Of theſe the thin and ſmall Clouds are firſt produced; and many of them meeting together, and preſſing cloſe, make the large and heavy Clouds, which the Winds drive every way abroad, till they break out into a raging Storm.

AND then, [p] the nearer the Tops of the Mountains approach the Sky, the higher they are, the more they ſmoke, and appear cover'd with the thick Darkneſs of a yellow Cloud; becauſe the Miſts that ariſe are ſo

[o] Certain rough and hooky Atoms, that are flying to and fro in the Air, meet and join together: Theſe form the thin Clouds firſt; and theſe thin Clouds condenſing and joining with one another, make the thick and heavy Clouds.

[p] Clouds frequently ſeem to riſe from the Tops of high Mountains, becauſe ſome thin Miſts and watery Steams, that are too ſubtle to be ſeen, are driven up thither by the Wind; where joining together, and growing thick, they become viſible.

thin

Ante videre oculi quàm poſſint tenuia, Venti
Portantes cogunt ad ſumma cacumina Montis.
Hic demum fit, uti turba majore coorta,
Condenſa, ac ſtipata ſimul cernantur, & udo
Vertice de Montis videantur ſurgere in æthram.
" Nam loca declarat ſurſum ventoſa patere
" Res ipſa, & ſenſus, Monteis cùm aſcendimus altos.
Præterea, permulta Mari quoque tollere toto
Corpora Naturam, declarant littore veſtes
Suſpenſæ, cùm concipiunt humoris adhæſum.
Quò magis ad nubeis augendas multa videntur
Poſſe quoque è ſalſo conſurgere momine ponti.
Præterea, fluviis ex omnibus, & ſimul ipſa
Surgere de terra nebulas, æſtumque videmus:
Quæ velut halitus, hinc ita ſurſum expreſſa feruntur,
Suffunduntque ſua Cœlum caligine, & altas
Sufficiunt nubeis paullatim conveniundo.
Urget enim quoque ſigniferi ſuper Ætheris æſtus,
Et quaſi denſando ſubtexit cærula nimbis.
Fit quoque, ut hunc veniant in cœtum extrinſecus illa
Corpora, quæ faciunt Nubeis, nimboſq; volanteis.
Innumerabilem enim numerum, ſummamq; Profundi
Eſſe infinitam docui: Quantaque volarent
Corpora mobilitate, oſtendi, quàmque repente
Immemorabile per ſpatium tranſire ſolerent.
Haud igitur mirum 'ſt, ſi parvo tempore ſæpe
Tam magnos Monteis tempeſtas, atque tenebræ
Cooperiant Maria, ac Terras, impenſa ſuperne.
Undique quandoquidem per caulas ætheris omneis,

Et

thin and ſubtle, that before they are diſcovered by the Eye, they are carried aloft by the Winds to the Tops of the higheſt Hills: And ſince they unite there in larger Bodies, and ſhew thick and condenſed, they ſeem to riſe from the Tops of theſe Hills into the Air; for when we aſcend a high Mountain, the Thing itſelf and Senſe demonſtrate, that the Winds tend to the higheſt Places, and reign there.

Besides, that Nature raiſes many Exhalations from the wide Sea, is plain, by obſerving, that Garments expanded upon the Shore will ſoon be wet; and therefore, to form ſuch vaſt Bodies of Clouds, many Seeds are thrown off and ariſe from the Motion of the ſalt Waters.

And we ſee that Miſts and watery Particles riſe from all the Rivers, and from the Earth itſelf; which, like a Vapour, are from thence ſqueezed out and carried upwards, and cover the whole Heavens with Darkneſs; and uniting together by degrees, are ſufficient to produce the Clouds: For the Seeds that are continually deſcending from above in a confuſed Manner, continually beat theſe Miſts upon the Back, and by condenſing and preſſing them cloſe, form them into Clouds over all the Sky.

It may be, likewiſe, that Seeds from without, from the immenſe Space of the Univerſe, may flow hither, and unite in the Production of the flying Clouds; for I have proved before, that theſe Seeds are without Number, and that the Void is Infinite. I have ſhewn how ſuddenly, and with what Celerity they paſs through this boundleſs Space. It is no wonder therefore, that Tempeſts and dark Clouds are in ſo ſhort a Time frequently ſpread over the whole Heavens, and cover the high Mountains, the Seas and the Earth, with ſo quick a Motion; ſince, from every Quarter, through all the Paſſages of the Air, through all the

Breathing-

Et quasi per magni circùm spiracula mundi
Exitus, introitusque elementis redditus extat.
Nunc age, quo pacto Pluvius concrescat in altis
Nubibus humor, & in terras demissus ut Imber
Decidat, expediam. Primùm jam semina Aquaï
Multa simul vincam consurgere nubibus ipsis
Omnibus ex rebus, pariterque ita crescere utrasque,
Et Nubeis, & Aquam, quæcunque in nubibus extat,
Ut pariter nobis corpus cum sanguine crescit,
Sudor item atque humor quicunque est denique membris.
Concipiunt etiam multum quoque sæpe marinum
Humorem, veluti pendentia vellera lanæ
Cùm supera magnum venti mare nubila portant.
Consimili ratione ex omnibus amnibus humor
Tollitur in nubeis: quò cùm benè semina aquarum
Multa modis multis convenere undique adacta:
Confertæ nubes vi venti mittere certant
Dupliciter: nam vis venti contrudit, & ipsa
Copia nimborum, turba majore coorta,
Urget, & è supero premit, ac facit effluere Imbreis.
Præterea, cùm rarescunt quoque Nubila ventis,
Aut dissolvuntur Solis super icta calore:
Mittunt humorem pluvium, stillantque, quasi igni
Cera super calido tabescens multa liquescat.
Sed vehemens imber fit, ubi vehementer utroque
Nubila vi cumulata premuntur, & impete venti.
At retinere diu pluviæ, longumque morari
Consuerunt, ubi multa fuerunt Semina aquarum;
Atque aliis aliæ Nubes, nimbique rigantes

Insuper

Breathing-places, I may ſay, of the Univerſe, the Seeds can make their Way hither and unite, or withdraw and fly away again.

AND now I ſhall explain in what Manner the Rain is formed within the Clouds above, and falls down in Showers upon the Earth. I ſhall firſt ſhew, that many Seeds of Rain are raiſed from every thing, together with the Clouds; and that they increaſe together, both the Clouds and the Rain contained within, in the ſame manner as the Blood increaſes in proportion with our Bodies, or as Sweat or any other Moiſture diffuſed through the Limbs. The Clouds likewiſe, like hanging Fleeces of Wooll, ſuck up many Particles of ſalt Water, when the Winds drive them over the open Sea: And by the ſame Rule a Quantity of Moiſture is raiſed into the Clouds from all the Rivers; and there theſe many Seeds of Waters meeting from all Parts, and uniting variouſly together, the Clouds being full, are obliged to diſcharge their Load of Moiſture for two Reaſons; either the Force of Winds drives them cloſe; or the Number of them, raiſed one above another, preſſes them down from above with their own Weight, and makes the Showers to pour down. *Rain.*

BESIDES, when the Clouds are made rare and thin by the Winds, or are diſſolved by the Heat of the Sun ſtriking upon them, they diſcharge their rainy Moiſture and drop, as Wax diſſolves and melts over a hot Fire.

BUT expect a violent Storm of Rain when theſe Clouds, heaped up, are preſſed, not only by their own Weight, but driven cloſe by the Stroke of Winds from without. *Storms.*

THE Rains uſed to confine us long at home, and to laſt for ſome Time, when there are Seeds of Moiſture in Abundance; when the dropping Clouds are raiſed on Heaps above, and are driven *Conſtant Showers.*

Insuper, atque omni volgò de parte feruntur:
Terraque cùm fumans humorem tota rehalat.
Hinc ubi Sol radiis tempestatem inter opacam
Adversa fulsit nimborum aspergine contra:
Tum color in nigris existit nubibus Arqui.
Cætera, quæ sursum crescunt, sursumq; creantur:
Et quæ concrescunt in nubibus omnia, prorsum
Omnia, Nix, Venti, Grando, gelidæque Pruinæ,
Et vis magna Geli, magnum duramen aquarum:
Et mora, quæ fluvios passim refrænat eunteis:
Perfacile'st tamen hæc reperire, animoque videre,
Omnia quo pacto fiant, quareve creentur,
Cùm benè cognôris, elementis reddita quæ sint.
Nunc age, quæ ratio Terraï motibus extet,
Percipe: Et in primis Terram fac ut esse rearis
Subter item, ut supera'st; Ventis, atque undique plenam
Speluncis, multosque lacus, multasque lacunas
In gremio gerere, & rupeis, deruptaque saxa:
Multaque sub tergo Terraï flumina tecta
Volvere vi fluctus, submersaque saxa putandum'st.
Undique enim similem esse sui, res postulat ipsa.
His igitur rebus subjunctis, suppositisque:
Terra supernè tremit magnis concussa ruinis
Subter, ubi ingenteis speluncas subruit ætas,
Quippe cadunt toti montes, magnoque repente
Concussu, latè dissèrpunt inde tremores:
Et meritò, quoniam plaustris concussa tremiscunt
Tecta viam propter non magno pondere tecta.
Nec minùs exsultant, ubi currus fortis equûm vis
Ferratos utrinque rotarum succutit orbeis.

Fit

every way abroad; and when the Earth, thoroughly ſoaked, ſends back the Vapours into the Air.

Rainbow.

AND when the Sun, in a dark Storm of Rain, ſtrikes with its Beams directly upon an oppoſite Cloud, full of Moiſture, then you ſee the Colours of the Rainbow drawn upon the black Clouds.

AND all other Appearances which are formed and increaſe in the upper Region of the Air, and all Meteors that are raiſed in the Clouds; the Snow, the Winds, the Hail, and chilling Froſts; and the ſtrong Ice, that hardens the Surface of the Waters, and ſtops and binds up the Current of the Rivers as they flow; it is eaſy to account for all theſe, and to apprehend their Cauſes, and how they are produced, if you conſider well the Virtue and Power of the Seeds from whence they ſpring.

Earthquakes.

LEARN now the Cauſe of Earthquakes: And firſt, you are to ſuppoſe that the Earth is the ſame below as it is above, that it is every way full of Winds and Caverns, and that it holds within its Bowels many Lakes, and Pools, and Rocks, and broken Stones. You muſt believe that many hidden Rivers flow with rapid Waves within, and roll the ragged Rocks along their Tide; for the Laws of Nature require that the Earth within and without ſhould be the ſame.

THIS being premiſed and ſuppoſed: The Earth trembles and ſhakes above with dreadful Ruin, when Age has tumbled in theſe mighty Caverns; for then whole Mountains ſink, and in a Moment, with the horrid Shock, ſpread frightful Tremblings all abroad: And no wonder, ſince whole Houſes by the Highway-ſide will quake as Carts, with no great Weight, paſs through the Streets; and ſo they ſtart as Chariots ſwiftly drive with mettled Horſes, they ſhake at every Jumping of the Wheel.

Fit quoque, ubi magnas in aquæ, vaſtaſque lacunas
Gleba vetuſtate è terra provolvitur ingens,
Ut jactetur aqua, & fluctu quoque terra vacillet:
Ut vas in terra non quit conſtare, niſi humor
Deſtitit in dubio fluctu jactarier intùs.

Præterea, Ventus cùm per loca ſubcava terræ
Conlectus parti ex una procumbit, & urget
Obnixus magnis ſpeluncas viribus altas;
Incumbit tellus quò Venti prona premit vis:
Tum ſupera terram quæ ſunt exſtructa domorum,
Ad cælumque magis quantò ſunt edita quæque,
Inclinata minent in eandem prodita partem:
Protractæque trabes impendent ire paratæ:
Et metuunt magni Naturam credere Mundi
Exitiale aliquod tempus, clademque manere,
Cùm videant tantam Terrarum incumbere molem.
Quòd niſi reſpirent Venti, non ulla refrænet
Res, neque ab exitio poſſit reprendere eunteis:
Nunc quia reſpirant alternis, inque graveſcunt,
Et quaſi conlecti redeunt ceduntque repulſi.
Sæpius hanc ob rem minitatur Terra ruinas,
Quàm facit: inclinatur enim, retroque recellit,
Et recipit prolapſa ſuas ſe in pondere ſedeis:
Hac igitur ratione vacillant omnia tecta,
Summa magis mediis, media imis, ima perhibum.

Eſt hæc ejuſdem quoque magni cauſa tremoris,
Ventus ubi, atque Animæ ſubitò vis maxima quædam,

Aut

THIS happens likewiſe, when great Weights of Earth, looſen'd by Time, plunge down into theſe deep and mighty Lakes; for then the Waters rage, and the Earth reels and ſtaggers with the Shock; as a Veſſel on the Ground cannot ſtand firm, unleſs the Liquor ceaſes to ferment and toſs within.

BESIDES, when Winds, collected in the Caverns of the Earth, direct their Force one Way, and beat with Fury on theſe hollow Places, the Earth inclines that Way where the Winds point their Stroke; and our Buildings, raiſed above, nod that Way too; the Higheſt ſhake the moſt; the hanging Beams ſtart from the Wall, and threaten to fly out: And yet Men are afraid to think that Nature has fixed a fatal Time when this great World ſhall be deſtroyed, and fall to Ruin, although they ſee the heavy Maſs of Earth leaning and tumbling to Pieces. And did not the Winds take Time to breathe, nothing could check their Fury, or keep them from deſtroying every thing before them: But ſince they ceaſe by turns, then rage again, and ſtorm with double Force, and are again repelled. Hence it is that the Earth oftner threatens us with Ruin than actually effects it: It inclines only, and then falls back; and though moved aſide, ſettles with all its Weight again in its former Place. For this Reaſon all our Houſes tremble and reel; the Higheſt ſhake the moſt, the Middle leſs, the Loweſt little or nothing.

THE great [q] Tremblings of the Earth may ariſe yet from another Cauſe; when Wind or violent Blaſts

[q] This Inclination and fluctuating Motion of the Earth, is often attended with a violent Beating and Succuſſion of it; for if the Wind break through the Caverns, and cleave the Earth, then Cities, Iſlands, *&c.* with all their Inhabitants, are ingulphed and ſwallowed up in the hideous Chaſm; but if the Wind does not break through, there is then only a

Aut extrinsecus, aut ipsa à tellure coorta
In loca se cava Terraï conjecit, ibique
Speluncas inter magnas fremit antè tumultu :
Versabundaque portatur, post incita cùm vis
Exagitata foras erumpitur, & simul artam
Dissindens terram magnum concinnat hiatum :
In Tyria Sidone quod accidit, & fuit Ægis
In Peloponneso : Quas exitus hic animaï
Disturbât urbeis, & Terræ motus obortus !
Multaque præterea ceciderunt mœnia magnis
Motibus in terris, & multæ per mare pessum
Subsedere suis pariter cum civibus urbes.
Quòd nisi prorumpit, tamen impetus ipsæ Animaï
Et fera vis Venti per crebra foramina terræ
Dispertitur, ut Horror ; & incutit inde tremorem :
Frigus uti nostros penitus cùm venit in artus,
Concutit invitos cogens tremere atque moveri.
Ancipiti trepidant igitur terrore per urbeis :
Tecta superne timent, metuunt inferne, cavernas
Terraï ne dissolvat Natura repente :
Neu distracta suum latè dispandat hiatum :
Idque suis confusa velit complere ruinis.
Proinde licet, quamvis cœlum terramque reantur
Incorrupta fore æternæ mandata saluti :
Attamen interdum præsens vis ipsa pericli
Subditat hunc stimulum quadam de parte timoris,
Ne pedibus raptim Tellus subtracta seratur

Blasts (raised either from without or within the Earth itself) throw themselves furiously into these hollow Caverns, and in these vast Dens roar and toss themselves about; and when they have rolled within, and raged with all their Might, they break abroad at last, and cleave the solid Earth, and make a hideous Chasm. This happened at *Sidon*, a City of the *Tyrians*, and at *Ægæ* in *Peloponnesus*. What Cities has this Eruption of the Wind destroyed? What Earthquakes has it produced? At Land, the Walls of many Towns have tumbled down by these violent Concussions; and many Cities, with all its Inhabitants, have sunk together into the Sea. But if the Wind does not break through, yet the Fury and raging Force of its Blasts are scattered through the many Pores of the Earth like a shivering Cold, and cause a Shuddering in its Bowels; as the Cold, when it seizes upon our Limbs, makes us shake against our Will, and tremble all over. Then Men stagger with doubtful Fear in all the Cities; they are in dread of their Houses above them, and of the Earth under their Feet; lest Nature should instantly break to Pieces the Caverns below; lest the divided Earth should open wide its Jaws, and fill them with the utter Desolation of Men and Houses.

Even Those who think the Heavens and the Earth are Eternal, and will be preserved safe for ever, yet the present Dread of impending Danger staggers them, and raises terrible Apprehensions, lest the Earth should instantly fail under their Feet, and sink into the great Abyss; lest the Dissolution of the Universe, from the very Founda-

Trembling, or as it were a Shuddering of the Earth, which is caused by the chilling Wind that is diffused through all its Pores.

In barathrum, rerumque ſequatur prodita Summa
Funditus, & fiat Mundi confuſa ruina.
Nunc ratio reddunda, augmen cur neſciat Æquor.
Principio, Mare mirantur non reddere majus
Naturam, quò tantu' fuat decurſus aquarum,
Omnia quò veniant ex omni Flumina parte.
Adde vagos imbreis, tempeſtateſque volanteis:
Omnia quæ maria, ac terras ſparguntque, rigantque.
Adde ſuos fonteis: tamen ad Maris omnia ſummam
Guttaï vix inſtar erunt unius ad augmen:
Quò minùs eſt mirum, Mare non augeſcere magnum.
Præterea, magnam Sol partem detrahit æſtu.
Quippe videmus enim veſteis humore madenteis,
Exſiccare ſuis radiis ardentibu' Solem.
At Pelage multa, & latè ſubſtracta videmus.
Proinde licet quamvis ex uno quoque loco Sol
Humoris parvam delibet ab æquore partem:
Largiter in tanto ſpatio tamen auferet undis.
Tum porro Venti magnam quoque tollere partem
Humoris poſſunt verrentes æquora ponti:
Una nocte vias quoniam perſæpe videmus
Siccari, molliſque luti concreſcere cruſtas.

Præterea,

tion, ſhould follow, and the Fabrick of the World ſhould fall into Ruin and Confuſion.

AND now we are to account why the Waters of the [r] Sea are never increaſed. And firſt, Men wonder that Nature does not inlarge the Bounds of the Sea, in proportion to the Falls of Water, and the Streams of ſo many Rivers that from all Parts flow into it; beſides the wandering Showers and flying Storms, that pour down and diſcharge themſelves upon the Land and Seas, you may add the Fountains and Springs likewiſe: But All Theſe, compared to the Vaſtneſs of the Sea, are hardly more than one Drop of Water, and therefore can contribute little to its Increaſe. No wonder then, that the wide Sea rolls within the ſame Bounds. *The Sea not increaſe.*

AND then, the Sun licks up a great Part of its Water with its Heat; for we ſee the Sun dries a Garment, dropping wet, with its burning Rays. And the Sea, we know, is widely ſpread, and expoſed to the Influence of his Beams. And though the Sun draws up but a very little Quantity of Moiſture from every Part of the Sea, yet, within ſo vaſt a Circumference, a great Store of Water muſt be drawn off.

THE Winds likewiſe, bruſhing over the Surface of the Sea, carry off a large Part; for we obſerve the Roads are frequently dried in one Night, and the ſoft Dirt grows hard.

[r] The Sea does not increaſe, becauſe the Gulph into which the Rivers diſembogue their Streams, is ſo vaſt, that all their Waters, together with the Rain, Snow, Hail, &c. ſeem not to add one Drop to the Sea. The Sun drinks up a great deal of its Moiſture; the Winds bruſh off and carry away no ſmall Quantity; the Clouds take ſome away. As the Rivers run into the Sea, ſo they are re-conveyed from thence, from through the hidden Veins of the Earth, back to their own Springs. Thus the Waters roll in a revolving Courſe, and therefore no wonder the Sea does not increaſe.

BESIDES,

Præterea, docui multum quoque tollere Nubeis
Humorem magno conceptum ex æquore ponti:
Et passim toto terrarum spargere in orbe,
Cùm pluit in terris, & venti nubila portant.
Postremò, quoniam raro cum corpore Tellus
Est, & conjunctas oras maris undique cingit:
Debet, ut in mare de terris venit humor aquaï,
In terras itidem manare ex æquore salso;
Percolatur enim virus, retròque remanat
Materies humoris, & ad caput amnibus omnis
Confluit: inde super terras redit agmine dulci,
Quà via secta semel liquido pede detulit undas.
Nunc ratio quæ sit, per fauceis montis ut Ætnæ
Exspirent ignes interdum turbine tanto,
Expediam: neque enim media de clade coorta
Flammæ tempestas Siculûm dominata per agros
Finitimis ad se convertit gentibus ora,
Fumida cùm cæli scintillare omnia templa
Cernentes pavida complebant pectora cura,
Quid moliretur rerum Natura novarum.
Hisce tibi rebus latè 'st, altèque videndum,
Et longè cunctas in parteis dispiciendum,
Ut reminiscaris, Summam rerum esse profundam,
Et videas, cælum Summaï totius unum
Quàm sit parvula pars, & quàm multesima constet:
Et quota pars Homo Terraï sit totius unus.
Quod bene propositum si planè contueare,
Ac videas planè; mirari multa relinquas.

BESIDES, I have ſhewn that the Clouds ſuck up a great deal of Moiſture from the wide Sea, and then ſcatter it down over the whole Earth, when the Rain falls, and the Winds drive the Clouds through the Sky.

LASTLY, Since the Earth is of a rare Contexture, and full of Pores, and every way ſurrounds the Body of the Sea which joins to it, it follows that, as the Waters flow from the Earth into the Sea, ſo they muſt return from thence into the Earth again. In theſe ſubterraneous Paſſages the ſaline Particles are ſtrained off, and the Waters flow back, and unite together at the Fountain Heads; from whence they glide ſweetly, with their collected Strength, over the Earth, through thoſe Channels where the Streams firſt cut their liquid Way.

The Burning of Mount Ætna.

NOW learn the Cauſe why Fires break out, with ſo much Fury, from the Jaws of Mount *Ætna*; for we are not to ſuppoſe, ſuch a Tempeſt of Fire rages over the Plains of *Sicily*, and brings ſuch Deſtruction with it from the *Gods*, as if it only raiſed the Admiration of all the neighbouring People, who ſeeing the whole Heavens ſparkling with Fire, and full of Smoke, trembled with anxious Concern, and wonder'd what new *Phænomenon* Nature was going to produce. The Reaſon of theſe Events requires a deeper and a wider Search. You muſt enter further into all their Parts, and then you will recollect that the Univerſe of Things is Infinite; and obſerve how ſmall a Part (ſcarce one of a Thouſand) is one Heaven, in compariſon of the Whole, and what a poor Pittance of the whole Earth is one Man. If you conſider this well, and obſerve cloſely, you will ceaſe wondering at many Things which now raiſe your Admiration.

FOR

Num quis enim noſtrûm miratur, ſiquis in artus
Accepit calido Febrim fervore coortam,
Aut alium quemvis Morbi per membra dolorem?
Obturgeſcit enim ſubito Pes, arripit acer
Sæpe dolor Denteis, oculos invadit in ipſos:
Exiſtit ſacer Ignis, & urit corpore ſerpens
Quamcunque arripuit partem, repitque per artus.
Nimirum, quia ſunt multarum Semina rerum:
Et ſatis hæc Tellus nobis Cælumque mali fert,
Unde queat vis immenſi procreſcere morbi.
Sic igitur toti cælo, terræque putandum'ſt
Ex infinito ſatis omnia ſuppeditare,
Unde repente queat Tellus concuſſa moveri,
Perque mare, & terras rapidus percurrere Turbo,
Ignis abundare Ætnæus, flammeſcere Cælum.
Id quoque enim fit, & ardeſcunt cæleſtia templa,
Ut Tempeſtates pluviæ graviore coortu
Sunt, ubi fortè ita ſe tetulerunt Semina aquarum.
At nimis eſt ingens Incendî turbidus ardor.
Scilicet, & fluvius, qui non eſt, maximus eii'ſt
Qui non antè aliquem majorem vidit: & ingens
Arbor, Homoque videtur: & omnia de genere omni,
Maxima quæ vidit quiſque, hæc ingentia fingit:
Cùm tamen omnia cum Cælo, Terraque, Marique
Nil ſint ad Summam Summaï totius omnem.
Nunc tamen, illa modis quibus inritata repentè
Flamma foràs vaſtis Ætnæ fornacibus efflet,

Expediam,

FOR where is the Wonder with any of Us, if a Man receives the burning Heat of a Fever within his Veins, or feels the Anguiſh of any other Diſeaſe in his Limbs? For our Foot often ſwells of a ſudden; a ſharp Pain frequently ſeizes upon our Teeth, and attacks our Eyes. There is ſuch a Thing as the [s] *Holy Fire*, that ſpreads over the Body, and burns the Part it fixes upon, and creeps over the Limbs. Nothing ſtrange! for the Seeds of Things are in great Abundance, and the Earth and the Heavens afford ſufficient Supplies of hurtful Seeds, from whence the ſharpeſt Diſeaſes may be produced in Us: And therefore you muſt think, that large Store of Seeds may flow from the Infinite Space, and ſupply the Earth and the whole Heavens. Theſe may cauſe thoſe ſudden and violent Tremblings of the Earth, that rapid Whirlwinds ſcour along the Land and Sea, and that there is abundant Fuel for the Flames of *Ætna*, and that the Sky is all in a Blaze; for this happens, and the Heavens are on fire, when the Seeds of Flame unite, as the Storms of Rain are the more violent when the Seeds of Water are collected and joined together.

BUT you will ſay, the Fire of *Ætna* is too great and impetuous. By the ſame Rule a River, not very large, appears a mighty Stream to one who never ſaw a greater; and ſo a Man or a Tree ſeems prodigious; and all other Bodies that we ſee, we imagine are extraordinary; when, alas! all Beings, with the Heavens, the Earth, and the Sea together, are nothing to the vaſt Univerſe of All.

The Breaking out of Flames.

AND now I ſhall explain by what Means the raging [t] Flame burſts ſuddenly abroad from the vaſt fiery

[s] Commonly called *St. Anthony's Fire.*

[t] The Eruption from Mount *Ætna* is cauſed by the Force of Wind. The Seeds of that Wind come from the Infinite Univerſe,

Expediam. Primùm totius ſubcava montis
Eſt natura, ferè ſilicum ſuffulta cavernis:
Omnibus eſt porro in ſpeluncis Ventus & Aër.
Ventus enim fit, ubi eſt agitando percitus Aër.
Hic ubi percaluit, calefecitque omnia circum
Saxa furens, quà contingit, Terramque: & ab ollis
Excuſſit calidum flammis velocibus ignem:
Tollit ſe, ac rectis ita faucibus ejicit altè,
Funditque ardorem longè, longèque favillam
Differt, & craſſa volvit caligine fumum:
Extruditque ſimul mirando pondere ſaxa:
Ne dubites, quin hæc Animaï turbida ſit vis.
Præterea, magna ex parti Mare montis ad ejus
Radices frangit fluctus, æſtumque reſorbet.
Ex hoc uſque mari Speluncæ Montis ad altas
Perveniunt ſubter fauceis: Hàc ire fatendum'ſt,
" Et penetrare mari penitus res cogit aperto:
Atque efflare foras, ideoque extollere flammas,
Saxaque ſubjectare, & arenæ tollere nimbos.
In ſummo ſunt ventigeni Cratêres, ut ipſi
Nominitant, Nos quas Fauceis perhibemus, & Ora.
Sunt aliquot quoque res, quarum unam dicere cauſam
Non ſatis eſt, verùm plureis, unde una tamen ſit.

Corpus

fiery Entrails of this Mountain. And firſt, Nature has formed the whole Mountain hollow within, and ſupports theſe Cavities by Arches of Stone. Now all Caverns are filled with Wind and Air; for Air, when it is violently moved, becomes Wind; and this Wind, when it is grown hot, and, furiouſly whirling about, has inflamed the Stones and the Earth by beating upon them, and from them has ſtruck out Sparks of Fire with rapid Flame, then it raiſes itſelf up, and throws itſelf violently, out of the open Jaws at the Top, into the Air; then it pours the Fire abroad, and ſpreads the burning Embers all about, and belches duſky Clouds of rolling Smoke, and ſhoots out Rocks of wondrous Weight. This, no doubt, is done by furious Blaſts of Wind within.

BESIDES, the Sea, for a great Way, daſhes its Waves againſt the Roots of this Mountain, and then again ſucks up its Tide. The Waters preſs into theſe Caverns that lie directly under thoſe open Jaws above; this you muſt allow; and the Flames, yielding to the driving Flood, there force their Paſſage out, and fly abroad, and caſt the Fire on high, and throw out Rocks, and raiſe whole Clouds of Sand; for on the Summit there are certain Baſons, where Wind is generated: The *Greeks* call them ſo; we call them *Mouths* and *Jaws*.

THERE are ſome Things, obſerve, for which it is not ſufficient to aſſign one Reaſon, but many;

Univerſe, and gathering together in the Mountain, drive out either the Flames that lurk within the Bowels of the Mountain, or thoſe they ſtrike and force out from the very Stones of it; or elſe that Wind ruſhes in at the Hollows that are at the Foot of the Mountain, and whoſe Entrances are open, when the ebbing Sea leaves the Shore (for the Sea waſhes the Foot of the Mountain) and blows out the Flames. He ſays, at laſt, that Winds are bred in the very Hollows of the Mountain. And then he gives many Reaſons; that, among them, one at leaſt may be true and certain.

out

Corpus ut exanimum si quod procul ipse jacere
Conspicias Hominis: fit ut omneis dicere causas
Conveniat lethi, dicatur ut istius una.
Nam neque cum ferro, neque frigore vincere possis
Interiisse, neque à morbo, neque fortè veneno:
Verùm aliquid genere esse ex hoc, quod Concio dicat,
Scimus: Item in multis hoc rebus dicere habemus.
Nilus in æstati crescit, campisque redundat
Unicus in terris Ægypti totius amnis.
Is rigat Ægyptum medium per sæpe calorem,
Aut quia sunt æstate Aquilones ostia contra
Anni tempore eo, quo Etesia flabra feruntur:
Et contra fluvium flantes remorantur, & undas
Cogentes sursus replent, coguntque manere.
Nam dubio procul hæc adverso flabra feruntur
Flumine, quæ gelidis à stellis Axis aguntur.
Ille ex æstifera parti venit amnis ab Austro
Inter nigra virûm, percoctaque sæcla calore,
Exoriens penitùs media ab regione diei.
Est quoque, uti possit magnus congestus arenæ
Fluctibus adversis oppilare ostia contra,

Cùm

out of which One only is the True: As when you see the dead Body of a Man, lying at a Distance upon the Ground, you are to recollect all the Causes which possibly might occasion his Death, in order to find out the right; for you cannot directly say, whether he died by the Sword, or by Cold, or by Disease, or perhaps by Poison, though we know it was by one of these, and every one thinks so. The same Method you are to observe in many other Cases.

THE *Nile*, the only [u] River in all *Egypt*, increases in the Summer, and overflows the Fields. It waters the Country of *Egypt* about the middle of Summer, either because in Summer the North Winds are opposite to the Mouths of the River, at the Season when the *Etesia's* blow, and beating hard against the Stream stop the Current, and driving the Waters upwards fill the Channel, and force back the Flood; for without doubt those Northern Winds blow directly against the Tide. The River flows from the warm Climate of the South, and divides the Country of the black *Æthiopians*, that are thoroughly sodden with the Sun's Heat, and rises far in the most Southern Part of the World. *The Overflowing of Nile.*

AND it may be, that great Heaps of Sand, that are raised against the Stream, choak the

[u] He assigns natural Causes for the Overflowing of the *Nile*. He says, first, that the *Etesian* or Annual Winds, which blow constantly from the North, at a certain Season of the Year, repel and drive back the Stream of the River that comes from the South, and are the Cause that it fills up its Channel, and overflows its Banks. If it should be objected, that the *Etesian* Wind (for Winds are light Bodies) is too weak to stop so great a Weight of Waters, he adds, that the Sands which the Sea, being agitated by those Winds, casts into the Mouths of the *Nile*, choak them up, and thus cause the Inundation. He adds two other Reasons; the Rains that fall at the Sources of the River, and the Melting of the Snows.

Cùm Mare permotum ventis ruit intus arenam.
Quo fit uti pacto liber minùs exitus amni,
Et proclivus item fiat minùs impetus undis.
Fit quoque, uti pluviæ forsan magis ad caput ejus
Tempore eo fiant, quo Etesia flabra Aquilonum
Nubila conjiciunt in eas tunc omnia parteis.
Scilicet ad mediam regionem ejecta diei
Cùm convenerunt, ibi ad altos denique monteis
Contrusæ nubes coguntur, vique premuntur.
Forsit & Æthiopum penitus de montibus altis
Crescat, ubi in campos albas descendere ningueis
Tabificis subigit radiis Sol omnia lustrans.
Nunc age, Averna tibi quæ sint loca cumque lacusque,
Expediam, quali natura prædita constent.
Principiò, quòd Averna vocantur, nomen id ab re
Impositum 'st, quia sunt Avibus contraria cunctis,
E regione ea quòd loca cùm advenere volantes,
Remigii oblitæ pennarum vela remittunt,
Præcipitesque cadunt molli cervice profusæ
In terram, si fortè ita fert natura locorum:
Aut in aquam, si fortè lacus substratus Averno 'st.
Qualis apud Cumas locus est montemque Vesevum,
Oppleti calidis ubi fumant fontibus auctus.
Est & Athenæis in mœnibus, arcis in ipso

Vertice,

Mouths of the River, when the Sea, by the Violence of the Winds, drives the Sand into the Channel, and ſtops it up. By this means the Paſſages of the River are more confined, and the Current of the Water is ſlower and of leſs Force.

OR perhaps the Rains are more violent near the Head of the River, at that Seaſon of the Year when the *Eteſian* Winds blow from the North, and drive all the Clouds to the more Southern Parts. When the Clouds meet in that warm Quarter, they are condenſed and preſſed hard againſt the high Mountains, and by that Force the Rain is ſqueezed out.

OR, laſtly, the Increaſe of the River may proceed from the high Mountains of the *Æthiopians*, when the Sun, that ſearches all Things with his diſſolving Rays, forces the melted Snow to deſcend into the Plains.

AND now the Nature of that Place or Lake we call [x] *Avernan*, I ſhall next explain. And firſt, It takes its Name from its Effect, becauſe 'tis fatal to the Life of Birds; for when the Feather'd-kind fly to this Place, their Flight is ſtopped, they flutter in the Air, and fall with hanging Wing and bended Head upon the Earth, if haply it be Earth, or in the Water if it be a Lake. At *Cumæ* there is a Place like This, and on the Mount *Veſuvius*, which, filled with burning Sulphur, throws out Smoke. Another of the ſame there is within the Walls of *Athens*, upon the Top *The Averni.*

[x] One of theſe *Averni* is at *Cumæ*, another near *Minerva*'s Temple in *Athens*, and a Third in *Syria*. Theſe Places were ſuppoſed to be the Entrances to Hell to the Palace of *Pluto*, and through them the *Manes* or Souls of the Dead are ſaid to paſs to the ſubterraneous Abodes. They were ſo called from the *Greek* Ἄορνος, derived from the Privative Particle ἀ, and ὄρνις a Bird; becauſe the noxious Vapours that exhaled from the *Averni* were ſo poiſonous, that they ſtruck dead the Birds that flew over them.

Vertice, Palladis ad templum Tritonidos almæ,
Quò nunquam pennis appellunt corpora raucæ
Cornices, non cùm fumant Altaria donis:
Usqueadeo fugitant non iras Palladis acreis
Pervigilî causa, Graiûm ut cecinere poetæ:
Sed natura loci hoc opus efficit ipsa sua vi.
In Syria quoque fertur item locus esse, videri,
Quadrupedes quoque quò simul ac vestigia primùm
Intulerint, graviter vis cogat concidere ipsa,
Manibus ut si sint Divis mactata repente.
Omnia quæ naturali ratione geruntur,
Et quibus è causis fiant, apparet origo:
Janua ne his Orci potiùs regionibus esse
Credatur pôsta, hinc Animas Acheruntis in oras
Ducere fortè deos Maneis infernè reamur:
Naribus alipedes ut Cervi sæpe putantur
Ducere de latebris serpentia sæcla ferarum.
Quod procul à vera quàm sit ratione repulsum,
Percipe; namque ipsa de re nunc dicere conor:
Principiò hoc dico, quod dixi sæpe quoque ante,
In Terra cujusque modi rerum esse figuras:
Multa homini quæ sunt vitalia: multaque morbos
Incutere, & Mortem quæ possint accelerare:
Et magis esse aliis alias Animantibus aptas
Res ad vitaï rationem ostendimus ante,
Propter dissimilem naturam, dissimileisque
Texturas inter sese, primasque figuras:
Multa meant inimica per aureis, multa per ipsas
Insinuant nareis infesta atque aspera odore:
Nec sunt multa parùm tactu vitanda, nec autem
Aspectu fugienda, saporeque tristia quæ sint.
Deinde videre licet quam multæ sint Homini res
Acriter infesto sensu, spurcæque, graveisque.

Arboribus

of that high Tower, near which the kind *Tritonian Pallas* has her Temple: Here the hoarse Ravens never steer their Flight, not when the Altars smoke with slaughter'd Victims: They do not shun this Tower to fly the Rage of angry *Pallas* for their officious Care, as [y] *Grecian* Poets sing; but 'tis the noxious Nature of the Place that drives them hence.

THEY say there's such a Place as This in *Syria*; where Beasts no sooner venture with their Feet, but the pernicious Vapour strikes them dead, as if by sudden Stroke they fell a Sacrifice to the Infernal *Gods*. All these Things proceed from natural Causes; and what these Causes are will soon appear, by tracing out their Principles; lest you should think in Places such as These Hell-Gates are fixed, and fancy that the *Gods* below draw through these Passages departed Souls into the Infernal Shades; as the swift Deer are said by Smelling to draw out the lurking Serpents from their Holes. But how absurd to Reason are such Thoughts, observe, for now I am going to explain.

AND first, I say, as I have often said before, that in the Earth are Seeds of Things of every Shape; many that prolong the Life of Man, and many that inflict Disease and hasten Death. And I have shewn that there are other Seeds peculiarly disposed to serve the Use of other Creatures, and support their Life; because these Seeds are different in their Nature, they vary in their Texture and their Shape. Many hurtful Seeds pass through the Ears, and many sharp and stinking Seeds affect the Nose; some are offensive to the Touch, some to be avoided by the Sight, and others bitter to the Taste. And thus you see how many Things there are deadly, distasteful, odious to the Sense.

[y] This refers to the Story of *Coronis* in *Ovid*'s *Metamorph. lib.* ii.

Arboribus primùm certis gravis umbra tributa 'ſt,
Uſqueadeo, capitis faciant ut ſæpe dolores,
Si quis eas ſubter jacuit proſtratus in herbis.
Eſt etiam in magnis Heliconis montibus arbos
Floris odore hominem tetro conſueta necare.
Scilicet hæc ideo Terris ex omnia ſurgunt
Multa modis multis multarum Semina rerum,
Quòd permiſta gerit Tellus, diſcretaque tradit.
Nocturnumque recens extinctum Lumen, ubi acri
Nidore offendit nareis conſopit ibidem,
Dejicere ut pronos qui morbus ſæpe ſuëvit.
Caſtoreoque gravi Mulier ſopita recumbit,
Et manibus nitidum teneris opus effluit eij,
Tempore eo ſi odorata 'ſt quo menſtrua ſolvit.
Multaque præterea languentia membra per artus
Solvunt, atque Animam labefactant ſedibus intus.
Denique, ſi in calidis etiam cunctere lavacris,
Plenior & ſolio in fueris ferventis aquaï :
Quàm facilè in medio ſit uti des ſæpe ruinas?
Carbonumque gravis vis, atque odor inſinuatur
Quam facilè in cerebrum, niſi aquam præcepimus antè?
At cùm membra hominis percepit fervida febris,
Tum ſit odor Vini plagæ mactabilis inſtar.
Nonne vides etiam terra quoque Sulfur in ipſa
Gignier? & tetro concreſcere odore Bitumen?
Denique ubi Argenti venas, Aurique ſequuntur,
Terraï penitus ſcrutantes abdita ferro ;

Qualeis

Some [z] Trees are so pernicious by their Shade, that they affect the Head with grievous Pain, if one lies on the Grass beneath the Boughs.

There is a Tree that grows on the high Hill of *Helicon*, whose Blossoms by their Smell give present Death; for in the Earth are Seeds of every Kind, variously mixed, which She with curious Art separates, and applies to Things, as each in its own Nature most requires.

A Lamp, just extinguished, is by its Smell so offensive to the Nose, that it stupifies, as if a Man were struck down by a Fit of an Apoplexy.

A Woman will fall dead asleep at the nauseous Smell of an Ointment, made of the Testicles of the Beaver; her fine Work will drop from her tender Fingers, especially if she smells it when her Fluors are upon her.

Besides, there are many Things that intirely dissolve the feeble Limbs all over the Body, and shake the very Soul within out of her Place.

If you stay long in a warm Bath, and continue in the Vessel of hot Water when the Belly is full, how apt will you be to faint before you get out?

The suffocating Power of Charcoal, and its stifling Smell, how soon do they find a Passage into the Brain, unless you have drank plentifully of Water before?

When a burning Fever has seized upon the Limbs, the Smell of Wine is like a Stroke that takes away the Sense.

Don't you observe likewise, that Sulphur and Bitumen, with its noxious Smell, are generated in the Bowels of the Earth itself?

And so, when Men persue the Veins of Gold and Silver, and with their Tools dig in the very

[z] *Pliny, lib.* xvii. *cap.* 12. says, that the Shade of the Walnut-tree offends the Head, and that no Plants will thrive under it.

Qualeis exſpirat Scapteſula ſubter odores?
Quidve mali ſit ut exhalent Aurata metalla?
Quas Hominum reddunt facies? qualeiſque colores?
Nonne vides, audiſve perire in tempore parvo
Quàm ſoleant, & quàm vitaï copia deſit,
Quos opere in tali cohibet vis magna? neceſſe'ſt
Hos igitur tellus omneis exæſtuet æſtus;
Expiretque foras in aperta, promptaque Cæli.
Sic & Averna loca Alitibus ſummittere debent
Mortiferam vim, de terra quæ ſurgit in auras,
Ut ſpatium cæli quadam de parte venenet:
Quò ſimul ac primùm pennis delata ſit Ales,
Impediatur ibi cæco conrepta veneno,
Ut cadat è regione loci, quà dirigit æſtus:
Quò cùm conruit, hæc eadem vis illius æſtus:
Relliquias vitæ membris ex omnibus aufert.
Quippe etenim primò quaſi quendam conciet æſtum:
Poſteriùs ſit, uti cùm jam cecidere veneni
In fonteis ipſos, ibi ſit quoque Vita vomenda,
Propterea quòd magna mali ſit copia circùm.
Fit quoque ut interdum vis hæc, atque æſtus Averni,
Aëra, qui inter aveis cunque'ſt terramque locatus,
Diſcutiat, propè uti locus hinc linquatur inanis:
Cujus ubi è regione loci venêre volantes,
Claudicat extemplo pennarum niſus inanis:
Et conamen utrinque alarum proditur omne.
Hic ubi nictari nequeunt, inſiſtereque alis,
Scilicet in terram delabi pondere cogit
Natura; & vacuum propè jàm per inane jacentes
Diſpergunt Animas per caulàs corporis omneis.
Frigidior porrò in puteis Æſtate fit Humor,
Rareſcit quia Terra calore, & ſemina ſiqua
Fortè vaporis habet, properè dimittit in auras.
Quò magis eſt igitur Tellus affecta calore:
Hoc fit frigidior, qui in terra'ſt abditus, Humor.

Frigore

Entrails of the Earth, what hurtful Vapours do the Mines exhale? What deadly Damps flow from the golden Ore? How wretchedly the Miners look? How wan their Colour? Have you not ſeen or heard how ſoon they die, how ſhort their Life is who are condemned to this ſad Servitude? The Earth then muſt needs belch out theſe poiſonous Exhalations, and ſend them all abroad, and taint the open Air.

The *Averni* thus throw out theſe deadly Steams, ſo fatal to the Birds. They riſe out of the Earth into the Air, and to ſome Diſtance blaſt the lower Skies. Here, when the Bird arrives upon the Wing, this latent Poiſon ſeizes on his Blood; his Flight is ſtopt, and down he falls; the Force of theſe Effluvia carries off the ſmall Remains of Life from all his Limbs, and ſtrikes him dead. Theſe Vapours firſt excite a ſort of Boiling in all his Veins; and when he drops into the Fountain whence the Poiſon ſprings, he dies; for there the noxious Vapours rage the moſt.

Or elſe, ſometimes, the Force and riſing Blaſts of theſe *Averni* diſpel the Air that lies between the Birds and the Earth, and the intermediate Space becomes a Void. Here, when the Birds are carried by their Flight, immediately they flutter in the Air, they clap their Wings in vain, their Pinions flag, and when they can no longer bear them up, Nature muſt drive them down upon the Earth with all their Weight; and as they, helpleſs, in the *Vacuum* lie, they breathe their Soul abroad through every Pore.

Wells cold in Summer.

The Water in ſome Wells, we find, is cold in Summer; becauſe the Earth is rarefied by the Sun's Heat, and by that means the Seeds of Fire it contains within, break ſwiftly out into the Air: And therefore the more the Earth is affected by the Heat, the colder will the Water be that is incloſed

Frigore cùm premitur porro omnis terra, coitque,
Et quasi concrescit: Fit scilicet, ut coëundo
Exprimat in puteos, siquem gerit ipsa, Calorem.
Est apud Ammonis fanum fons luce diurna
Frigidus, at calidus nocturno tempore fertur:
Hunc homines fontem nimis admirantur, & acri
Sole putant subter terras fervescere raptim,
Nox ubi terribili terras caligine texit:
Quod nimis a vera'st longè ratione remotum:
Quippe ubi Sol nudum contrectans corpus aquaï,
Non quierit calidum supera de reddere parte,
Cùm superum lumen tanto fervore fruatur:
Quî queat hic subter tam crasso corpore terram,
Percoquere humorem, & calido sociare vapori?
Præsertim cùm vix possit per septa domorum
Insinuare suum radiis ardentibus æstum?
Quæ ratio est igitur? nimirum terra magis quòd
Rara tenet circum hunc Fontem, quàm cætera tellus.
Multaque sunt ignis propè semina corpus aquaï.
Hinc, ubi roriferis terram nox obruit umbris,
Extemplò subtus frigescit terra, coitque.
Hac ratione fit, ut, tanquam compressa manu sit,
Exprimat in Fontem, quæ Semina cumque habet ignis,
Quæ calidum faciunt laticis tactum atque saporem.
Inde ubi Sol radiis terram dimovit obortis,
Et rarefecit calido miscente vapore:

Rursus

incloſed within. But when the Earth is contracted with the Cold, when its Surface grows cloſe, and its Pores are ſtopped, this Reſtraint hinders the Heat from flying out; it is then ſqueezed together into the Wells, and the Water becomes hot.

There is a Fountain, near the Temple of *Jupiter Ammon*, that is cold in the Day, and hot by Night. Men ſtrangely wonder at the Quality of this Spring, and imagine that when the Night has ſpread her dreadful Darkneſs o'er the World, the Water is warmed by the violent Heat of the Sun through the Body of the Earth. But this Reaſon is far from being true; for if the Sun, ſtriking upon the open Body of the Water, is not able to warm even the Surface of it, when it receives the Force of his deſcending Rays with all their Heat, how can He warm the Water, and infuſe his Heat through ſo thick a Body as the Earth; eſpecially, ſince he is ſcarce able, with his ſcorching Beams, to pierce through the Walls of our Houſes?

What then is the Reaſon? Doubtleſs This; becauſe the [a] Earth, near this Fountain, is more rare and ſpungy than it is in other Places, and contains within it many Seeds of Fire near the Body of the Water itſelf. Here, when the Night has ſpread the World with dewy Shades, the Earth below grows inſtantly cold, and is contracted; by this Means it is compreſſed, as with your Hand, and ſqueezes out thoſe Seeds of Fire into the Spring, which make the Water warm to Feel and Taſte. But when the Sun has driven away the Night with his bright Rays, and with his Heat has rarefied the Earth, and made it looſe, theſe Seeds of

[a] The Earth being compreſſed by the Cold of the Night, ſqueezes out and tranſmits into the Water thoſe Seeds of Heat, by means of which the Water grows hot; but being looſened by the Heat of the Day, ſhe receives again into her Bowels thoſe very ſame Seeds; and thus the Water becomes cold.

Fire

Rursus in antiquas redeunt primordia sedeis
Ignis, & in terram cedit calor omnis aquaï :
Frigidus hanc ob rem fit Fons in luce diurna.
Præterea, Solis radiis jactatur aquaï
Humor, & in luci tremulo rarescit ab æstu :
Propterea fit uti quæ semina cunque habet ignis,
Dimittat : quasi sæpe gelum, quod continet in se,
Mittit, & exoluit glaciem, nodosque relaxat.
Frigidus est etiam Fons, supra quem sita sæpe
Stupa jacit flammas concepto protinus igni :
Tedaque consimili ratione accensa per undas
Conlucet, quocunque natans impellitur auris :
Nimirum quia sunt in Aqua permulta vaporis
Semina, de Terraque necesse 'st funditus ipsa
Ignis corpora per totum consurgere Fontem,
Et simul exspirare foras, exireque in auras,
Non tam viva tamen, calidus queat ut fieri Ignis.
Præterea, dispersa foras erumpere cogit
Vis per Aquam subitò, sursumque ea conciliari :
Quod genus endo mari spirat Fons, dulcis aquaï
Qui scatit, & salsas circum se dimovet undas.
Et multis aliis præbet regionibus æquor
Utilitatem oportunam sitientibu' Nautis,
Quod dulceis inter salsas intervomit undas.
Sic igitur per eum possunt erumpere Fontem,
Et scatere illa foras in stupam Semina : quò cùm
Conveniunt, aut cùm tedaï corpori adhærent,

Ardescunt

Fire return into their former Place, and all the Heat that warm'd the Spring retires within the Earth again; and ſo the Fountain in the Day is cold.

BESIDES, the Water in the Day is ſtrongly moved by the Sun's Rays, and by his trembling Streams of Heat grows rare, and ſo lets out the Seeds of Fire it held by Night; juſt as by the Heat it ſhakes off Seeds of Cold, and melts the Ice, and looſens all its Bonds.

THERE likewiſe is a cold Spring, over which if you place Tow or Flax, it immediately takes fire, and is all in a Blaze. A Torch, newly extinguiſhed, in the ſame manner, gently drawn over the Surface, is lighted by this Water, and flames out at every Breath of Air. And no wonder; for there are many Seeds of Fire in the Water itſelf, and many muſt needs riſe out of the Earth, and aſcend through all the Fountain, and flow abroad, and make their Way into the Air; but yet they are not ſo hot as to ſet the Spring on fire.

BESIDES, the innate Force of theſe Seeds, diſperſed through the Water, compels them to move upwards, and to unite upon the Surface; as we ſee ſometimes a Fountain of ſweet Water bubble up in the Middle of the Sea, and beat off the ſalt Waves that are about it. The Sea affords many of theſe Springs, that bring a ſeaſonable Relief to the thirſty Mariners, by throwing out Streams of freſh Water among the ſalt [b]. The Seeds of Fire may in the ſame manner break through the Water of this Fountain, and flow out into the Tow. Here, when they unite and ſtick to the Body of

[b] The Seeds of Fire riſing up to the Surface of the Water, may there be condenſed and gather'd together, in ſuch a manner, as to kindle any Combuſtibles that are apt to take fire, if they are advanced to them.

the

Ardeſcunt facilè extemplò : quia multa quoque in ſe
Semina habent ignis ſtupæ tedæque tenentes.
Nonne vides etiam, nocturna ad lumina Lychnum
Nuper ubi extinctum admoveas, accendier antè
Quàm tetigit flammam ? tedamque pari ratione ?
Multaque præterea, priùs ipſo tacta vapore
Eminus ardeſcunt, quàm cominus imbuat ignis.
Hoc igitur fieri quoq; in illo Fonte putandum'ſt.
Quod ſupereſt, agere incipiam quo fœdere fiat
Naturæ, Lapis hic ut ferrum ducere poſſit,
Quem Magneta vocant patrio de nomine Graii,
Magnetum quia ſit patriis in finibus ortus.

Hunc

the Torch, they immediately fall into a Flame; for Flax and Tow contain many Seeds of Fire within, which make them eaſily diſpoſed to burn.

HAVE not you obſerved, when you hold a Candle newly extinguiſhed, to another that is lighted, it catches fire before it touches the Flame? A Torch likewiſe, by that ſame Rule, will do the ſame; and many other Things will take fire at a Diſtance, before the Flame reaches them. And this you may imagine is the Caſe of the Fountain abovementioned.

AND now I ſhall begin to ſhew by what Power of Nature it is that the Stone (which the *Greeks* call a [c] *Magnet*, from the Country that produces it, for it is found in the Region of the *Magnetes*) has the Virtue to attract Iron. *Of the Loadſtone.*

MEN

[c] The Poet, in order to explain the attractive Virtue of this Stone, premiſes four chief Poſitions, which though he has proved them already, yet he thinks fit to inculcate again in this Place. 1. That certain Corpuſcles are continually flowing off from all Things. 2. That no concrete Body is ſo ſolid as not to contain ſome empty little Spaces. 3. That the Corpuſcles that are emitted from Things, do not agree with all Things alike, and in the ſame manner, and produce not the ſame Effects on them. 4. That the void little Spaces are not alike in all Things, but differ in Size and Figure, and therefore cannot be fit for all Bodies indifferently. This being premiſed, he proceeds to explain how the Loadſtone attracts Iron, or the Iron is conveyed to the Loadſtone. Many Particles (he ſays) flow from the Loadſtone, and diſſipate the Air all around it; and thus many void little Spaces are made. But when the Iron is placed within the Sphere of that diſſipated Air, there being a great deal of empty Space between that and the Loadſtone, the Corpuſcles of the Iron leap more freely forward into that Void (for the Seeds of all Bodies fly forward on a ſudden into the empty Space) and for that Reaſon are carried towards the Loadſtone. Now they cannot tend that Way, without dragging along with them their coherent Seeds (for the Seeds of Iron are moſt intricately intangled and twined together) and conſequently the whole Maſs of Iron. But becauſe the Iron moves any way upwards, downwards, acroſs, or in any Obliquity, without the leaſt Diſtinction, according as it is placed to the Loadſtone, he ſays,

Hunc homines Lapidem mirantur, quippe catenam
Sæpe ex annellis reddit pendentibus ex se.
Quinque etenim licet interdum, plureisque videre
Ordine demissos levibus jactarier auris,
Unus ubi ex uno dependet subter adhærens;
Ex alioque alius Lapidis vim, vinclaque nosci:
Usqueadeo permananter vis pervalet ejus.
Hoc genus in rebus firmandum'st multa priùs, quàm
Ipsius reij rationem reddere possis:
Et nimium longis ambagibus est adeundum:
Quò magis attentas aureis, animumque reposco.
Principiò, omnibus à rebus, quascunque videmus,
Perpetuò fluere, ac mitti, spargique necesse'st
Corpora, quæ feriant oculos visumque lacessant:
Perpetuòque, fluunt cretis ab rebus odores,
Frigus ut à fluviis, Calor à sole, Æstus ab undis
Æquoris exesor mærorum littora propter:
Nec varii cessant sonitus manare per Aures.
Denique in Os salsi venit humor sæpe saporis,
Cùm mare versamur propter; dilutaque contra
Cùm tuimur misceri Absinthia tangit Amaror:
Usqueadeo omnibus ab rebus res quæque fluenter
Fertur, & in cunctas dimittitur undique parteis:
Nec mora, nec requies inter datur ulla fluendi,

Perpetuò

Men are amazed at the Qualities of this Stone; for it will make a Chain of ſeveral little Rings of Iron, without a Link between, to hang together intirely from itſelf; you may ſometimes ſee Five or more hanging ſtraight down, and play in the gentle Air, as they ſtick cloſe and depend at the Bottom one upon another; the Ring that follows feels the Attraction and Power of the Stone from that above it. So ſtrongly is the Virtue of the *Magnet* communicated to the ſeveral Rings; it acts with ſo great a Force.

In Inquiries of this Nature many Things are to be firſt proved, before we can fix upon the true Cauſe; we muſt trace the Subject through many long and intricate Difficulties; and therefore I beg you will hear me with a willing Mind, and with the cloſeſt Attention.

And firſt, Certain Seeds muſt neceſſarily flow, be ſent out, and continually diſperſed abroad, from all Things whatever we ſee, which muſt ſtrike upon the Eye, and affect the Sight. From ſome Bodies a Train of Smells are alway flying off. So Cold is emitted from the Rivers; Heat from the Sun; a ſalt Vapour from the Water of the Sea, that eats through Walls along the Shore; and various Sounds are always flying through the Air. And as we walk upon the Strand, a briny Taſte frequently offends our Mouth; and when we ſee a Bunch of Wormwood bruiſed, the Bitterneſs ſtrikes upon the Palate. So plain it is that ſomething is continually flowing off from all Bodies, and is ſcattered all about. There is no Intermiſſion, the Seeds

ſays, that this could not be, but by reaſon that the empty Space that is made by Corpuſcles that flow from the *Magnet*, and into which all Bodies, that otherwiſe tend only downwards, are protruded indiſcriminately by the Strokes and Blows of other Bodies. This in general is what he obſerves concerning the Loadſtone.

Perpetuò quoniam ſentimus, & omnia ſemper
Cernere, Odorari licet, & ſentire Sonorem.
Nunc omnes repetam quàm raro corpore ſint res,
Commemorare, quod in primo quoque carmine claret.
Quippe etenim, quamquam multas hoc pertinet ad res
Noſcere, cum primis hanc ad rem protinus ipſam,
Qua de diſſerere aggredior, firmare neceſſe'ſt
Nil eſſe in promptu, niſi miſtum Corpus Inani.
Principio ſit, ut in ſpeluncis ſaxa ſuperna
Sudent humore, & guttis manantibu' ſtillent:
Manat item nobis è toto corpore Sudor,
Creſcit barba, pilique per omnia membra, per artus:
Diditus in venas cibus omneis, auget, alitque
Corporis extremas quoque parteis unguiculoſque.
Frigus item tranſire per æs, calidumque vaporem
Sentimus: ſentimus item tranſire per aurum,
Atque per argentum, cùm pocula plena tenemus.
Denique per diſſepta domorum ſaxea voces
Pervolitant, permanat Odos, Friguſque, Vapoſque
Ignis: quin Ferri quoque vim penetrare ſuëvit,
Undique qua circum corpus lorica coërcet;
Morbida vis quæcunque extrinſecus inſinuatur.
Et tempeſtates terra cæloque coortæ
E cælo emotæ terraque repente faceſſunt,
Quandoquidem nihil eſt, non raro corpore nexum.
Huc accedit, uti non omnia, quæ jaciuntur
Corpora cunque ab rebus, eodem prædita ſenſu,
Atque eodem pacto rebus ſint omnibus apta.
Principiò, Terram, Sol excoquit, & facit are:
At glaciem diſſolvit, & altis montibus altè
Exſtructas ningueis radiis tabeſcere cogit,
Denique cera liqueſcit in ejus pôſta vapore,
Ignis item liquidum facit æs, aurumque reſolvit:
At coria, & carnem trahit, & conducit in unum.

Humor

never ceaſe to flow, becauſe the Senſe is continually affected, we ſtill continue to Feel, to See, to Smell and Hear.

Now I ſhall repeat what I have proved at large in the firſt Book of this Poem, that no Bodies are perfectly ſolid; for though it is proper to know this upon many Accounts, yet it is of principal Uſe in the Subject I now offer to explain. In this place it is neceſſary to eſtabliſh this Truth, that there is nothing in Nature but Body mixed with Void.

And firſt, In the deep Caverns of the Earth, the Rocks above will ſweat with Moiſture, and weep with flowing Drops; and Sweat will flow from all our Bodies, and through every Pore. The Beard will grow, and Hairs ſpread o'er our Members and our Limbs. Nature divides our Food through all the Veins; it feeds and nouriſhes the extreme Parts, our very Nails. We find that Cold and Heat will paſs through Braſs, will make their Way through Gold and Silver. We know, by feeling the Outſide of the Cup, whether the Juice within be hot or cold. And, laſtly, Sounds will pierce Stone Walls of Houſes; and ſo will Smells, and Cold, and Heat. The Force of Fire, thrown from without, will paſs through Iron, and ſcorch the Soldiers Limbs, though arm'd about with Coats of Mail. And Tempeſts, riſing from the Earth or Skies, and ſent from thence, will ſtrike through every thing before them; for nothing in Nature is without ſome Void.

Besides, all Seeds that are thrown off from Bodies, are not the ſame in Quality and Shape, nor do therefore they equally agree to Things they ſtrike or act upon; for firſt the Sun burns up and dries the Earth, but thaws and melts the Snows ſo deep upon the Mountain-tops. And Wax will drop when placed before the Fire, and Braſs will run, and Gold diſſolve by Heat; but Skins and Fleſh it ſhrinks

Humor aquæ porro ferrum condurat ab igni,
At coria, & carnem mollit durata calore:
Barbigeras oleaſter eò juvat uſque Capellas,
Diffluat ambroſia quaſi verò, & nectare tinctus:
At nihil eſt, Homini fronde hac quod amarius extet.
Denique Amaracinum fugitat Sus & timet omne
Unguentum; nam, ſetigeris ſubus acre venenum'ſt,
Quod nos interdum tanquam recreare videtur.
At contrà Nobis Cœnum teterrima cùm ſit.
Spurcities, eadem Subus hæc res munda videtur,
Inſatiabiliter toti ut volvantur ibidem.
Hoc etiam ſupereſt, ipſa quam dicere de re
Aggredior, quod dicendum priùs eſſe videtur.
Multa foramina cùm variis ſint reddita rebus,
Diſſimili inter ſe natura prædita debent
Eſſe, & habere ſuam naturam quæque, viaſque,
Quippe etenim varii ſenſus Animantibus inſunt,
Quorum quiſque ſuam propriè rem percipit in ſe.
Nam penetrare alià ſonitus, aliaque ſaporem
Cernimus è ſuccis, alià Nidoris odores,
Propter diſſimilem naturam, textaque rerum:
Præterea manare aliud per Saxa videtur:
Atq; aliud per Ligna: aliud tranſire per Aurum:
Argentoque foras aliud, Vitroque meare.
Nam fluere hàc Species, illàc Color ire videtur:
Atque aliis aliud citiùs tranſmittere eâdem.
Scilicet id fieri cogit Natura viarum,
Multimodis varians, ut paullò oſtendimus antè.
Quapropter benè ubi hæc confirmata atque locata
Omnia conſtiterint nobis præpôſta, parata:
Quod ſupereſt, facilè hinc ratio reddetur, & omnis
Cauſa patefiet, quæ Ferri pelliciat vim.

Principio,

and ſhrivels up. Water will harden Steel, made weak by Fire; but ſoftens Skins and Fleſh, made hard by Heat. Leaves of wild Olive pleaſe the bearded Goats, as if they flow'd with Juice of *Nectar* or *Ambroſia*, when nothing is more bitter than that Leaf to us. The Swine fly every ſtrong Perfume, and fear the Smell of every Ointment; 'tis ſharpeſt Poiſon to the Briſtly Race, but cheers our Spirits with a ſweet Delight: And then, to roll in Mud is the moſt odious Filthineſs to us, to them a cleanly Pleaſure; they are never tired of wallowing in the Mire.

BUT before I enter fully upon the Subject before us, it is proper firſt to premiſe, that ſince there are many Pores of little Spaces in all Compound Bodies, it is neceſſary that theſe Paſſages ſhould be of different Natures, and ſhould vary ſeverally in their Size and Figure; for all Creatures are formed with different Organs, every one of which has an Object proper and peculiar to itſelf. Sounds, we perceive, make their Paſſage one Way, and Taſte another, and Smell another, according to the different Nature and Texture of the Things that ſtrike the Senſe. One Thing, we find, will make its Way through Stones, another through Wood, another will pierce through Gold, another through Silver, and another will fly through Glaſs. This the Images flow through, through Theſe the Heat; and ſome Seeds will ſooner pierce through the ſame Pores than others: This is owing to the different Figures of theſe Paſſages, which vary wonderfully in Shape, as we ſaid before. Theſe Things therefore, being fully proved and laid down, and every thing made ready and eaſy for the Grand Inquiry, we ſhall eaſily diſcover the Reaſon, and open every Cauſe that moves and invites the Iron to the Stone.

Principio, fluere è Lapide hoc permulta neceſſe 'ſt
Semina, ſive Æſtum, qui diſcutit Aëra plagis:
Inter qui Lapidem, Ferrumque 'ſt cunque locatus.
Hoc ubi inaniter ſpatium, multuſque vacefit
In medio locus: extemplo primordia Ferri
In vacuum prolapſa cadunt conjuncta, fit utque
Annulus ipſe ſequatur, eatque ita corpore toto.
Nec res ulla magis primoribus ex elementis
Indupedita ſuis arctè connexa cohæret,
Quàm validi Ferri naturæ frigidus horror.
Quò minùs eſt mirum, quod paullò diximus antè,
Corpora ſi nequeunt de Ferro plura coorta
In vacuum ferri, quin Annulus ipſe ſequatur:
Quod facit & ſequitur donec pervênit ad ipſum
Jam Lapidem, cæciſque in eo compagibus hæſit.
Hoc fit item cunctas in parteis, unde vacefit
Cunque locus, ſive ex tranſverſo, ſive ſuperne,
Corpora continuò in vacuum vicina feruntur.
Quippe agitantur enim plagis aliunde, nec ipſa
Sponte ſua ſurſum poſſunt conſurgere in auras,
Huc accedit item, quare queat id magis eſſe:

AND first, [d] Many Seeds or Effluvia are continually flying off from the Stone, and by their Blows disperse and drive away the Air that lies between the *Magnet* and the Iron: This Space being empty, and a Void made between, the Corpuscles of the Iron rush out suddenly in a Train, all linked together, into this *Vacuum*; so that the whole Body of the Iron Ring, to which they are joined, immediately follows; for nothing is made up of Seeds more intangled and connected together, than the cold and tough Substance of Iron. And therefore (as we said before) it is the less to be wonder'd, if the Seeds cannot fly off from the Iron into the Void, but those before must draw on those behind, and the whole Ring follows at last; which it does, and continues to move, till it comes close to the Stone, and, fixed by secret Bonds, sticks to it. And these Effluvia of the Iron, that lie nearest the Stone, rush into the Void every way, upwards or across, wherever the Space is empty; for they are driven by the Force of other Seeds; nor have they any Power to move upwards by their own natural Motion.

You may add another Reason to account for

[d] He says, that many Corpuscles flow as well from the Loadstone as from the Iron, but the greater Quantity and the more strong from the *Magnet*. Hence it comes to pass that the Air is always dispersed and driven away to a greater Distance round about the Loadstone, and consequently that fewer empty little Spaces are made around the Iron; and because when the Iron is placed within the Sphere (as they say) of the Air that is removed and driven away, there must be a great deal of void Space between that and the Loadstone: The Corpuscles of the Iron fly the more freely into that empty Space, and therefore necessarily towards the *Magnet*; but those Corpuscles of the Iron cannot hurry the Way in a great Quantity, without dragging along with them the Particles that adhere to them, and by consequence the whole Mass of Iron.

" *Hæc quoque res adjumento, motuque juvatur:*
Quòd ſimul à fronte eſt Annelli rarior Aër
Factus, inanituſque locus magis ac vacuatus.
Continuò fit, uti qui poſt eſt cunque locatus
Aër, à tergo quaſi provehat atque propellat.
Semper enim circum poſitus res verberat Aër.
Sed tali fit uti propellat tempore Ferrum,
Parte quòd ex una ſpatium vacat, & capit in ſe.
Hic, ubi, quem memoro, per crebra foramina Ferri'ſt
Parvas ad parteis ſubtiliter inſinuatus:
Trudit & impellit, quaſi Navim velaque Ventus.
Denique res omnes debent in corpore habere
Aëra, quandoquidem raro ſunt corpore, & Aër
Omnibus eſt rebus circumdatus appoſituſque.
Hic igitur, penitus qui in Ferro'ſt abditus Aër,
Sollicito motu ſemper jactatur, eoque
Verberat Annellum dubio procul: & ciet intùs
Scilicet: atque eôdem fertur, quo præcipitavit
Jam ſemel, & quamquam in partem conamina ſumſit.
Fit quoque ut à Lapide hoc Ferri natura recedat
Interdum, fugere, atque ſequi conſueta viciſſim.
Exſultare etiam Samothracia ferrea vidi:
Et ramenta ſimul Ferri furere intus ahenis
In Scaphiis, lapis hic Magnes cùm ſubditus eſſet:
Uſqueadeo fugere à Saxo geſtire videtur.

Ære

this Experiment, which is, that the [e] Iron is driven forward, and assisted in its Motion from without; for the Air before the Steel being more rare, and the Space between more empty and void than it was, hence it is that the Air that is behind strikes upon the Back of the Ring, and drives and forces it on; for the Air that surrounds all Bodies, beats upon them with continual Blows; but then only it drives on the Iron, when the Space is empty on that Side, and fit to receive it. The Air therefore, which I observe, entering into the many Pores of the Iron, and subtilly conveying itself into the little Passages, thrusts and forces it on, as a Ship is driven by Wind and Sails.

AND then, all Things must contain within some Parts of Air; for all Bodies are rare, and full of Pores, and Air surrounds and pierces through every thing. This Air therefore that lies concealed in the Body of the Iron, is always toss'd with violent Motion, and beats upon the Ring, and agitates it within; and so the Iron is carried on towards the Void, to which it was moving, and whither all its Force was first directed.

BUT sometimes the Substance of the Iron will fly from the *Magnet*; it will withdraw sometimes, as well as press towards it: For I have seen little *Samothracian* Rings of Iron, and Filings of Steel, put into a brasen Pot; and the Stone being applied to the Bottom of the Vessel, the Iron will leap and dance upwards; so eager is it to be gone, and avoid the Stone. And this great A-

[e] The Motion of the Iron is assisted by the outward Air, which, since it is always driving forward, and that too with more Force, the more there is of it cannot but push on the Iron into that Place where there is least Air, and consequently most Void, which must be towards the Loadstone. This Motion is likewise assisted by the inward Air, which, by reason of its continual Motion and Agitation, is always driving forward, towards that Place that is most void and empty.

version

Ære interpoſito diſcordia tanta creatur,
Propterea, quia nimirum priùs æſtus ubi Æris
Præcepit, Ferrique vias poſſedit apertas;
Poſterior Lapidis venit æſtus, & omnia plena
Invenit in Ferro: neque habet quà tranet, ut antè.
Cogitur offenſare igitur pulſareque fluctu
Ferrea texta ſuo; quo pacto reſpuit ab ſe,
Atque per Æs agitat, ſine eo quæ ſæpe reſorbet.
Illud in his rebus mirari mitte, quòd æſtus
Non valet è Lapide hoc alias impellere item res:
Pondere enim fretæ partim ſtant, quod genus Aurum:
Ac partim Raro quia ſunt cum corpore, ut æſtus
Pervolet intactus, nequeunt impellier uſquam;
Lignea materies in quo genere eſſe videtur.
Inter utraſque igitur Ferri natura locata,
Æris ubi accepit quædam corpuſcula: tum ſit,
Impellant ut eam Magnesî ſemina ſaxi.
Nec tamen hæc ita ſunt aliarum rerum aliena,
Ut mihi multa parûm genere ex hoc ſuppeditentur,
Que memorare queam inter ſe ſingulariter apta.
Saxa vides primùm ſola cooleſcere Calce:
Glutine materies Taurino ita jungitur una,
Ut vitio venæ tabularum ſæpius hiſcant,
Quàm laxare queant compages taurea vincla.
Vitigeni latices in Aquaï fontibus audent

verſion ariſes from the Interpoſition of the Braſs; for when the Particles of the Braſs have entered and filled up the open Pores of the Iron, then come the Effluvia of the Loadſtone; and finding the Paſſages of the Iron full, and no more open for them to pierce through as before, they beat upon the Bits of Iron, and drive them forward with all their Force. And thus the Particles of the Stone, paſſing through the Braſs, throws the Iron from it, which otherwiſe it would take to its Embrace.

DO not be ſurpriſed [f] to find that the Effluvia of the Stone do not drive away other Bodies from it in the ſame manner, for ſome remain unmoved upon the Account of their Weight; Gold is of this Sort: Others becauſe they are rare, and their Pores are wide, ſo that the Particles that fly off from the Stone paſs through without touching, and therefore can have no Power to move them; of this Kind is the Texture of Wood. The Nature of Iron is placed between theſe Two; and when its Pores are full of thoſe braſen Particles, then it is that the Effluvia of the *Magnet* beat upon it and drive it off.

NOR is the Friendſhip between the Loadſtone and the Steel ſo ſingular a Caſe; I can produce Inſtances of many Things, whoſe Natures are peculiarly fit and ſuited to each other. And firſt, You obſerve that Stones are cemented together only by Lime; and Boards are ſo joined together by Glue, made of the Ears and Genitals of Bulls, that the ſolid Wood of a Table will ſooner ſplit, than the ſtrong Joints of the Glue will ſtart or fall aſunder. Wine will mingle with Spring Water,

[f] The Reaſon why other Bodies do not move in this manner, is becauſe they are too heavy to be moved; or if they are light, they are often too rare; ſo that the Corpuſcles of the *Magnet* find a free and open Paſſage through them.

when

Miſceri, cùm Pix nequeat gravis, & leve Olivum:
Purpureuſque colos Conchylî mergitur unà
Corpore cum Lanæ, dirimi qui non queat uſquam;
Non ſi Neptuni fluctu renovare operam des:
Non, mare ſi totum velit eluere omnibus undis. 1075
Denique res Auro Argentum concopulat unà,
Ærique æs Plumbo fit uti jungatur ab albo.
Cætera jam quàm multa licet reperire? quid ergo?
Nec tibi tam longis opus eſt ambagibus uſquam,
Nec me tam multam hîc operam conſumere par eſt:
Sed breviter paucis reſtat comprendere multa. 1081
Quorum ita texturæ ceciderunt mutua contra,
Ut cava conveniant plenis hæc illius, illa
Hujuſque: inter ſe junctura horum optima conſtat.
Eſt etiam, quaſi ut annellis, hamiſque plicata 1085
Inter ſe quædam poſſint coplata teneri:
Quod magis in Lapide hoc fieri Ferroque videtur.
Nunc, ratio quæ ſit Morbis, aut unde repente
Mortiferam poſſit cladem conflare coorta
Morbida vis Hominum generi, Pecudumque catervis,
Expediam. Primùm multarum ſemina rerum 1091
Eſſe ſupra docui, quæ ſint vitalia nobis:
Et contrà, quæ ſint morbo, mortique, neceſſe 'ſt
Multa volare; ea cùm caſu ſunt fortè coorta,
Et perturbarunt cælum, fit morbidus Aër. 1095
Atque ea vis omnis Morborum, peſtilitaſque,
Aut extrinſecus, ut nubes nebulæque ſupernè
Per cælum veniunt, aut ipſa ſæpe coorta

when heavy Pitch and ſmooth Oil will not. The purple Colour of the *Murex* incorporates ſo into the Body of Wooll, that it can never be taken out; no, not if you ſtrive to recover it to its native Whiteneſs by all the Waves of the Sea, not if you waſh it in all the Water of the Ocean. There is but one Mineral that will ſoulder Gold and Silver together; and Braſs is joined only by white Lead. How many Things of this Nature might be produced? To what Purpoſe? I would by no means lead you ſo far out of the Way, nor give myſelf ſo much Trouble in ſuch Inquiries. I have many Things yet to explain, but I ſhall be as ſhort as poſſible.

THOSE Things whoſe Textures ſo mutually anſwer to one another, that the Cavities of this Thing agree with the Plenitudes of That, and the Cavities of That with the Plenitudes of This, may be conjoined moſt eaſily, and in the ſtricteſt Manner. And ſome Things may be ſo joined to others, as if they were faſtned together by [g] Hooks and Rings; and in this Manner it is that the Loadſtone ſeems to be connected to the Steel.

Now I ſhall teach from whence Diſeaſes ſpring, and whence ariſe the peſtilential Blaſts, that ſpread their deadly Poiſon, and deſtroy both Man and Beaſt. And firſt (as I have ſaid) The Seeds of many Things are ever flying through the Air; ſome are Sound and Vital to Mankind, and others bring on Diſeaſe and Death: Theſe when they ariſe and taint the Sky, the Air becomes infected. Now the morbid Force of all Diſeaſes, every Peſtilence comes either from without, as Clouds and Miſts fall from the Heavens above; or riſes *Of Plagues.*

[g] On the Surface of the *Magnet* there are Hooks, and of the Surface of the Steel little Rings, which the Hooks catch hold of.

from

De terra ſurgunt, ubi putrorem humida nacta'ſt,
Intempeſtivis Pluviiſque, & Solibus icta.
Nonne vides etiam cæli novitate, & aquarum
Tentari, procul à patria quicunque domoque
Adveniunt? Ideo quia longè diſcrepat Aër.
Nam quid Britannum cælum differre putamus,
Et quod in Ægypto'ſt, quà mundi claudicat Axis?
Quidve quod in Ponto'ſt differre à Gadibus, atque
Uſque ad nigra virûm, percoctaque ſæcla calore.
Quæ cùm quatuor inter ſe diverſa videmus,
Quatuor à ventis, & cæli partibus eſſe,
Tum color & facies hominum diſtare videntur
Largiter, & morbi generatim ſæcla tenere.

Eſt Elephas morbus, qui propter flumina Nili
Gignitur Ægypto in media, neque præterea uſquam.
Atthide tentantur Greſſus, Oculique in Achæis
Finibus, inde aliis alius locus eſt inimicus
Partibus, ac membris: Varius concinnat id Aër.

Proinde ubi ſe Cælum, quod nobis fortè alienum'ſt,
Commovet, atque Aër inimicus ſerpere cæpit:
Ut nebula, ac nubes paullatim repit, & omne
Quà graditur, conturbat, & immutare coactat.
Fit quoque, ut in noſtrum cùm vênit deniq; cælum,
Corrumpat, reddatque ſui ſimile atque alienum.

Hæc igitur ſubitò clades nova, peſtilitaſque,
Aut in aquas cadit, aut fruges perſidit in ipſas,
Aut aliòs hominum paſtus, pecudumq; cibatus:
Aut etiam ſuſpenſa manet vis Aëre in ipſo:

Et

from the Earth itſelf, when drenched by fierce unſeaſonable Showers, and pierced by the Sun's ſcorching Beams, it ſends unwholſome Vapours through the Air. Have you not ſeen that thoſe who ſearch out foreign Lands, and leave their Country and their native Homes, contract new Pains from the ſtrange Water, and the Air they breathe? The mighty Difference of the Air occaſions This; for don't you think the Air of *Britain* is widely different from the Air of *Egypt*, where the North Pole is never ſeen? or that the Air of *Pontus* differs from that of *Gades* and *Æthiopia*, where the black Race of Men are thoroughly ſodden with the Sun's Heat? The Four Quarters of the Air, we may ſuppoſe, are different in their Temper and their Quality, becauſe they are oppoſed to the Four Quarters of the Earth, where Men, we find, in every Region widely diſagree in Face and Complexion, and are tormented with Diſeaſes peculiar to the Countries where they live.

The Leproſy was known firſt in *Egypt*, near the River *Nile*, and no where elſe. The *Athenians* are tortured with the Gout, the *Achæans* with ſore Eyes. So every Country is an Enemy to one Part and Member of the Body or other; and This muſt be imputed to the Air.

And when the morbid peſtilential Air of a Country, remote from us, moves from its firſt Abode, and the fatal Vapour begins to advance, it creeps firſt by degrees like a Cloud or Miſt, and diſturbs and changes every thing as it goes; and when it comes to the Climate where we live, it corrupts every thing, and makes it like itſelf, and therefore deadly and deſtructive to Us.

This waſting Plague, theſe ſad infectious Blaſts, fall either in the Water, or fix upon the Fruits or other Food of Men, or on the Provender of Cattle; or they may hang ſuſpended in the Air

Et cùm ſpiranteis miſtas hinc ducimus auras,
Illa quoque in corpus pariter ſorbere neceſſe'ſt.
Conſimili ratione venit Bubus quoque ſæpe
Peſtilitas, etiam pecubus balantibus ægror.
Nec refert utrum nos in loca deveniamus
Nobis adverſa, & cæli mutemus amictum:
An cælum nobis ultrò natura cruentum
Deferat, aut aliquid, quo non conſuevimus uti:
Quod nos adventu poſſit tentare recenti.
Hæc ratio quondam morborum, & mortifer æſtus
Finibu' Cecropiis funeſtos reddidit agros,
Vaſtavitque vias, exhauſit civibus urbem.
Nam penitus veniens Ægypti è finibus ortus,
Aëra permenſus multum, campoſq; natanteis,
Incubuit tandem populo Pandionis: omnes
Inde catervatim morbo mortique dabantur.
Principiò, caput incenſum fervore gerebant:
Et dupliceis oculos ſuffuſa luce rubenteis.
Sudabant etiam fauces intrinſecus atro
Sanguine, & ulceribus vocis via ſepta coibat;
Atque animi interpres manabat lingua cruore,
Debilitata malis, motu gravis, aſpera tactu:
Inde, ubi per fauceis pectus complerat, & ipſum
Morbida vis in cor mæſtum confluxerat ægris:
Omnia tum verò vitaï clauſtra lababant.
Spiritus ore foras tetrum volvebat odorem,
Rancida quo perolent projecta cadavera ritu.
Atque animi prorſum vires totius, & omne

Languebat

Air above, that when we draw our Breath we needs muſt ſuck this Poiſon, mingled with it, into our Bodies. In the ſame Manner the Peſtilence ſeizes on the Cattle, and the Contagion infects the Sheep. And the Danger is the ſame, whether we change our Climate, and travel into a Country where the Air is pernicious to us; or whether Nature of her own accord brings the cruel Infection from abroad, or introduces a Diſeaſe we are not uſed to, which upon its firſt Approach may prove hurtful to Us.

ONCE ſuch a Plague as This, ſuch deadly Blaſts, poiſon'd the Coaſts of [h] *Athens*, founded by *Cecrops:* It raged through every Street, unpeopled all the City; for coming from far (from *Egypt*, where it firſt began) and having paſſed through a long Tract of Air, and o'er the wide Sea, it fixed at laſt upon the Subjects of King *Pandion.* Men ſoon, by Heaps, fell Victims to the Rage of Death and the Diſeaſe. *The Plague of Athens.*

THE Head was firſt attack'd with furious Heats, and then the Eyes turn'd bloodſhot and inflamed; the Jaws within ſweated with black Bloods; the Throat (the Paſſage of the Voice) was ſtopt by Ulcers; the Tongue (the Interpreter of the Mind) o'erflowed with Gore, and, faulter'd with the Diſeaſe, felt rough, and ſcarce could move. And when the Poiſon, through the Jaws, had filled the Breaſt, and flowed into the miſerable Stomach, then all the Springs of Life began to fail; the Breath ſent out a filthy Smell abroad, like the rank Stench of rotten Carcaſes; the Powers of all the Soul and all the Body flag

[h] He deſcribes that memorable Plague that broke out in *Attica*, in the firſt Year of the *Peloponneſian* War, and waſted the whole Country, as well as the City of *Athens*, called *Cecropid*, from *Cecrops* who built it. This Plague is no leſs accurately than elegantly deſcribed by *Thucydides*, who was himſelf both a Spectator and Sharer of it.

Languebat corpus, lethi jam limine in ipso.
Intolerabilibusque malis erat anxius anguor
Assiduè comes, & gemitu commista querela,
Singultusque frequens noctem persæpe, diemque,
Conripere assiduè nervos & membra coactans,
Dissolvebat eos, defessos antè, fatigans.
Nec nimio cuiquam possis ardore tueri
Corporis in summo summam ferviscere partem:
Sed potiùs tepidum manibus proponere tactum,
Et simul ulceribus quasi inustis omne rubere
Corpus, ut est per membra Sacer cùm diditur ignis.
Intima pars homini verò flagravit ad ossa:
" Flagravit stomacho flamma, ut fornacibus intùs,
Nil adeo posset cuiquam leve, tenueque membris
Vertere in utilitatem: ad ventum & frigora semper
In fluvios partim gelidos ardentia morbo
Membra dabant, nudum jacientes corpus in undas.
Multi præcipites lymphis putealibus altè
Inciderunt, ipso venientes ore patente.
Insedabiliter sitis arida corpora mersans
Æquabat multum parvis humoribus imbrem.
Nec requies erat ulla mali, defessa jacebant
Corpora, mussabat tacito Medicina timore,
Quippe patentia cùm totas ardentia nocteis
Lumina versarent oculorum expertia somno,
Multaq; præterea mortis tum signa dabantur,
Perturbata Animi mens in mœrore, metuque,
Triste supercilium, furiosus voltus, & acer,
Sollicitæ porro plenæque sonoribus aures,
Creber spiritus, aut ingens, raròque coortus,
Sudorisq; madens per collum splendidus humos,
Tenuia sputa, minuta, croci contincta colore,
Salsaque per fauceis raucas vix edita tussi:
In manibus verò nervi trahier, tremere artus:

and grow faint, as in the Gates of Death. To these innumerable Evils followed close a sad Distress and Sinking of the Mind, loud Sighs with bitter Moans; and frequent Sobbings, all the Day and Night, twitch'd and convulsed the Nerves and every Limb, and loosen'd every Joint, and sorely rack'd the Wretches, tired out with Pains before. Yet you could not perceive, by the Touch, that the Surface of the Body was inflamed with any extraordinary Heat; it felt only warm to the Hand, and looked red all over with burning Pustules, as when the *Sacred Fire* spreads o'er the Limbs: But all within was in a Flame, that pierced the very Bones; the Heat raged in the Stomach, as in a Furnace; no Garment, ever so light or thin, could be endured upon their Limbs; they rushed into the Wind and Cold; some plunged their Bodies, scorched with the Disease, in Rivers, and naked threw themselves in chilling Streams; some ran with open Mouths, and headlong leap'd into deep Wells; the parching Thirst, insatiable, so burnt their Bodies, it made whole Showers of Water seem no more than a few Drops.

THE Pain was without Intermission, without End; the Body lay quite spent, stretched out; the burning Eyes wide open, and, without Sleep for many a restless Night, rolled dreadfully about. The Physician mutters to himself in silent Fear, and leaves the Patient in Despair, for many Signs of coming Death appeared: The Mind distracted with Dread and Horror; a stern Brow; a Countenance fierce and furious; the Ears tormented with a buzzing Noise; the Breath thick, or deep and seldom drawn; a frothy Sweat, flowing in Abundance over the Neck; the Spittle thin and dry, and yellow as Saffron, and the salt Matter could scarce be brought up through the Jaws by coughing; a Contraction of the Nerves in the

A pedibuſque minutatim ſuccedere frigus
Non dubitabat, item ad ſupremum denique tempus
Compreſſæ nares, naſi primoris acumen
Tenue, cavati oculi, cava tempora, frigida pellis,
Duraque, inhorrebat rictum, frons tenta minebat:
Nec nimiò rigida poſt ſtrati morte jacebant:
Octavoque ferè candenti lumine ſolis,
Aut etiam nona reddebant lampade vitam.
Quorum ſiquis (ut eſt) vitârat funera lethi,
Ulceribus tetris, & nigra proluvie alvi;
Poſteriùs tamen hunc tabes lethumque manebat:
Aut etiam multus capitis cum ſæpe dolore
Conruptus ſanguis plenis ex naribus ibat:
Huc hominis totæ vires corpuſque fluebat.
Profluvium porro qui tetri ſanguinis acre
Exierat, tamen in nervos huic morbus & artus
Ibat, & in parteis genitaleis corporis ipſas.
Et graviter partim metuentes limina lethi
Vivebant ferro privati parte virili:
Et manibus ſine nonnulli pedibuſque manebant
In vita tamen, & perdebant lumina partim:
Uſqueadeo mortis metus his inceſſerat acer.
Atque etiam quoſdam cepere oblivia rerum
Cunctarum, neque ſe poſſent cognoſcere ut ipſi.
Multaque humi cùm inhumata jacerent corpora ſupra
Corporibus, tamen alituum genus atque ferarum
Aut procul abſiliebat, ut acrem exiret odorem:
Aut, ubi guſtârat, languebat morte propinqua.
Nec tamen omnino temerè illis ſolibus ulla
Comparebat avis, nec noctibus ſæcla ferarum
Exibant ſylvis: Languebant pleraque morbo,
Et moriebantur: cùm primis fida canum vis
Strata viis animam ponebat in omnibus ægram.
Extorquebat enim vitam vis morbida membris.

Incomitata

Hands, and a Trembling over all the Limbs, and a Coldneſs creeping up gradually from the Feet; the Noſtrils pinched in, as at the Point of Death; the Noſe ſharp; the Eyes ſunk; the Temples hollow; the Skin cold and hard; a frightful Diſtortion of the Mouth, and the Skin of the Forehead ſtretched and ſhining. Nor did the Wretches lie long under the cold Hands of Death, for they expired commonly upon the eighth, or at fartheſt upon the ninth Day.

But if any of the Infected, as ſome did, eſcaped with Life, either the filthy Ulcers breaking, or by a moſt offenſive Looſeneſs, they fell at laſt into a Conſumption, and then died; or Streams of corrupted Blood, with grievous Head-ach, flowed from his ſtuffed Noſtrils, and thus his Strength and Life ran out, and the Wretch bled to Death. Such as eſcaped a ſharp Flux of filthy Blood at the Noſe, the Poiſon pierced into their Nerves and Limbs, and ſeized upon their very Genitals; and ſome were ſo terrified at the Approach of Death, that they ſuffered the Virile Member to be cut off, to preſerve Life. Some remained alive without Hands and Feet, and ſome loſt their Eyes; ſo terrible was the Fear of Death to theſe miſerable Wretches. Some were ſeized with an intire Forgetfulneſs of every thing; they did not ſo much as know themſelves.

When Heaps of Bodies lay one upon another, unburied, upon the Ground, yet the Birds of Prey, and the wild Beaſts, either kept at a Diſtance to avoid the noiſome Stench, or if they taſted they ſoon died. At that Time no Birds appeared abroad in the Day, nor did the wild Beaſts leave the Woods by Night; many of them were infected with the Diſeaſe, and fell down dead; the faithful Dogs eſpecially lay gaſping out their infected Breath in every Street, for the Poiſon drove

Incomitata rapi certabant funera vasta:
Nec ratio remedî communis certa dabatur:
Nam quod alîs dederat vitaleis Aëris auras
Volvere in ore licere, & cœli templa tueri:
Hoc aliis erat exitio, lethumque parabat.
Illud in his rebus miserandum & magnopere unum
Ærumnabile erat, quòd ubi se quisque videbat
Implicitum morbo, morti damnatus ut esset,
Deficiens animo mœsto cum corde jacebat
Funera respectans, animam & mittebat ibidem.
Idque vel in primis cumulabat funere funus:
Quippe etenim nullo cessabant tempore apisci
Ex aliis alios avidi contagia morbi:
Nam quicunque suos fugitabant visere ad ægros,
Vitaï nimiùm cupidi, mortisque timentes,
Pœnibat paullò post turpi morte malaque
Desertos, opis experteis, incuria mactans,
Lanigeras tanquam pecudes, & bucera sæcla.
Qui fuerant autem præstò, contagibus ibant,
Atque labore, pudor quem tum cogebat obire,
Blandaque lassorum vox mista voce querelæ.
Optimus hoc lethi genus ergo quisque subibat:
Inque aliis alium populum sepelire suorum
Certantes, lacrymis lassi luctuque redibant.
Inde bonam partem in lectum mœrore dabantur:
Nec poterat quisquam reperiri, quem neq; morbus,
Nec mors, nec luctus tentaret tempore tali.

Præterea,

out Life from every Limb. The many Funerals of the Dead were hurried away without Order, and unattended. Nor was there any certain Remedy to be applied; for what was of Service to ſome, and relieved the Patient, and preſerved Life, was fatal and brought Death to others.

BUT the moſt wretched and deplorable Thing of all, at this Time, was, that when once a Perſon found himſelf infected with the Diſeaſe, as if the Sentence of Death had paſſed upon him, his Spirits failed him, he fell into Melancholy and Deſpair, thought of nothing but Death, and ſo gave up the Ghoſt.

AND Funerals were heaped one upon another, becauſe the fierce Contagion of the Diſeaſe inceſſantly raged, and carried on the Infection. And if any one, too fond of Life, and fearing to die, avoided to viſit the miſerable Sick, the ſame Want of Help was ſoon his own Puniſhment; he died in a filthy and deplorable Manner, abandon'd, and without Aſſiſtance, and periſhed by Neglect, like the wretched Beaſts of the Field.

AND Thoſe who were compell'd by Shame, and by the moving Cries and piteous Moans of their Friends, to attend them in their Diſtreſs, were ſeized by the Infection, and died by the Diſeaſe and the Fatigue. Indeed the moſt Pious among them loſt their Lives in this manner: And when they had endeavoured to bury the Bodies of whole Families of their Friends, among thoſe of the Friends of others, they returned, wearied with Grief and Weeping, and moſt of them took to their Beds for Sorrow. And there was not One to be found who, in this calamitous Time, had not grievouſly ſuffered, either by the Diſeaſe, or by Death, or by the moſt bitter Pain and Anguiſh of Mind.

Præterea, jam paſtor, & armentarius omnis,
Et robuſtus item curvi moderator aratri,
Languebant, penituſque caſis contruſa jacebant
Corpora, paupertate & morbo dedita morti.
Exanimis pueris ſuper exanimata parentum
Corpora nonnunquam poſſes, retroque videre
Matribus, & patribus natos ſuper edere vitam:
Nec minimum partim ex agris ægroris in urbem
Confluxit, languens quem contulit Agricolarum
Copia, conveniens ex omni morbida parti.
Omnia complebant loca tectaque quò mage eos tum
Confertos ita acervatim mors accumulabat.
Multa ſiti proſtrata viam per, proque voluta
Corpora ſilanos ad aquarum ſtrata jacebant,
Intercluſa anima nimia ab dulcedine aquaï.
Multaq; per populi paſſim loca promta, viaſq;
Languida ſemianimo tum corpore membra videres,
Horrida pædore, & pannis cooperta perire
Corporis inluvie: Pellis ſuper oſſibus una,
Ulceribus tetris prope jam, ſordique ſepulta.
Omnia deniq; ſancta Deûm delubra replêrat
Corporibus mors exanimis, onerataque paſſim
Cuncta cadaveribus Cœleſtum templa manebant:
Hoſpitibus loca quæ complerant Ædituentes.
Nec jam relligio Divûm, nec Numina magni
Pendebantur: Enim præſens Dolor exſuperabat.
Nec mos ille Sepulturæ remanebat in urbe,
Ut priùs hic populus ſemper conſuerat humari.
Perturbatus enim totus trepidabat, & unus

Quiſque

Besides, the Shepherds and the Herdſmen, and the luſty Ploughman pined away with the Infection; their Bodies lay miſerably ſtretched out in their cloſe narrow Huts, and died of Poverty and the Diſeaſe. You might frequently ſee the dead Parents lying over their dead Children, and again, the Children expiring upon the Bodies of their wretched Mothers and Fathers.

Nor was it a ſmall Addition to this Plague that was brought from the Country to the City; for the infected Peaſants flock'd hither in Multitudes from all Parts, and carried the Sickneſs along with them. They filled all the Houſes, and all Places; and as they were pent up cloſe together, Death had the greater Power to ſlay them on Heaps. Many Bodies lay along in the Streets, gaſping for Thirſt; and rolling to the publick Conduits, they drank inſatiably, and were ſuffocated with Water: Others you might ſee in the Highways and common Places, languiſhing, with their Bodies half dead, horrible with Filth, cover'd with Rags, and rotting with the Corruption of the Limbs; there was nothing but Skin upon the Bones, and that putrefied with eating Ulcers, and buried in Naſtineſs.

And laſtly, Death had filled all the Temples of the *Gods* with dead Bodies, all the Shrines of the celeſtial Deities were loaded every where with Carcaſes. The Prieſts furniſhed theſe Places with ſuch wretched Gueſts. Nor was there any Reverence paid to the *Gods*, their Divinities were no more regarded; for the preſent Calamity overcame every thing.

Nor did the People any longer obſerve that Cuſtom of Sepulture they had ever followed, which was, to bury their Dead in the City; they were all diſtracted and amazed, and every one buried

Quisque suum pro re consortem mœstus humabat.
Multaque vis subita, & paupertas horrida suasit.
Namque suos consanguineos aliena rogorum 1281
Insuper instructa ingenti clamore locabant,
Subdebantque faceis, multo cum sanguine sæpe
Rixantes potiùs quàm corpora desererentur.

buried his wretched Friend as the Exigency of Things would permit.

AND ſudden Rage, and dreadful Poverty, drove Men into many outrageous Actions: They would place their Relations, with violent Outcries, upon the Funeral Piles that were raiſed for others, and light the Fire; and often quarrel, with much Loſs of Blood, rather than forſake the Bodies of their Friends.

F I N I S.

INDEX *to the* Second Volume.

A

Academicks, 45.
Æquinoctial Line, 173.
Æther deſcribed, 135. Its conſtant Motion, 157.
Ætna, the Burning of that Mountain, 283.
Air, its Uſe in Reſpiration, 81. Its various Changes, 135.
Air in all Bodies, 313. The Difference of Air, 319.
Ambition, the Fruits of it, 205.
Amour, the Misfortunes attending it, 95.
Animals, how preſerved, 187.
Anthony's Fire, 285.
Arceſilas, 43.
Athens reformed Mankind, 235.
Atoms, their various Motions to produce the World, 151.
Averni, their Nature, 291. Their Effects, 297.
Autumn, the Seaſon for Thunder, 261.

B

Barrenneſs, the Cauſe of it, 103.
Beaſts, their Dreams, 85. Beaſts uſed in War, 219. The State of Beaſts happier than Man, 131.
Birds the firſt Animals, 183.
Bodies not ſolid, 307.
Boys, the Effect of making themſelves giddy, 39.
Braſs, its Uſe, 215.

C

Centaurs, their Nature explained, 65. No ſuch Things, 189.
Certainty of our Senſes, 43.
Chaos, all Things made out of it, 149.
Child, why like Parents or Grandfathers, 101. When born, deſtitute and miſerable, 131.
Clouds, whence formed, 153. Their meeting cauſes Thunder, 245. How produced, 249. Their Origin explained, 269.
Cock frightful to a Lion, 63.
Colour diſcharged from the Surface of Bodies, 13.
Convex, an Account of Convex Glaſſes, 31.
Creation of the World, an Account of it, 127.

D

Day, the Length and Shortneſs of the Days, 171.
Death, all Things ſubject to it, 145.
Democritus, his Opinion of the Spheres, 165.
Diſtance of Objects diſcover'd, 25.

Dogs,

Dogs, their Dreams, 85.
Dreams, the Cauſes of them, 83. Frightful Dreams, 87.
Drink, its Uſe, 77.
Dryden, his Deſcription of Enjoyment, 107.

E

Earth, of itſelf unfruitful, 129. Its various Changes, 133. How produced, 155. Why it does not fall, 159. Is united to the other Parts of the World, 161. Is continually changing, 185.
Earthquakes, 275.
Eccho, its Nature, 53.
Eclipſes, the Reaſon of them, 179.
Effluvia of the Loadſtone, 311.
Elements ſubject to change, 133. The continual fighting of the Elements, 145.
Elephants uſed in War, 217.
Enjoyment deſcribed, 105.
Epicurus, his Opinion of the Members of the Body, 73. His Praiſes celebrated, 113, 235.
Eternal, how Things are eternal, 143.
Eyes offended by the Sun, 33. Sore Eyes, 319.

F

Fancies in our Sleep, 43. They ſeem real, 67.
Fate, all Things ſubject to it, 139.
Fever, the Nature of it, 59.
Fire periſhes and is renewed, 137. How it firſt began, 203.
Flame, the Breaking-out of Flames, 285.
Folly of praying to the Gods, 211.
Food, different agreeable to different Palates, 57.
Form explained, 11. Forms compoſed of Images that flow from Bodies, 15. In what Manner they are reflected, 19. The Forms of the Gods, 209.
Fountain, cold by Day and hot by Night, 299.

G

Garments, the firſt Uſe of them, 221.
Glaſs, Images reflected by a Glaſs, 19. How they appear in a Glaſs, 29. How they paſs from one Glaſs to another, 31.
Gods, they live at Eaſe, 119. The Fear of the Gods, 209. They are Terrors to Mankind, 239.
Gold firſt diſcover'd, 215.
Government, the Original of it, 207.
Gout, 319.
Grafting invented, 223.

H

Heat of the Sun explained, 165.
Heaven not the Seat of the Gods, 125. The Heavens have a Beginning and End, 139. The Formation of the Heavens, 153.
Hellebore, its Nature, 59.
Herbs firſt produced, 181.
Hercules, his Exploits, 115.

Horſe

Horſe ſeems to move upwards in a River, 41. The Neighing of Horſes, 203.
Hounds, their Dreams, 85.
Hunger, the Reaſon of it, 75.

I

Jaundice, the Effects of the Yellow-Jaundice, 33.
Image, the Images of Things deſcribed, 9. Always flowing from the Surface of Bodies, 11. Not diſcovered by the Eye, 13. Their ſubtle Nature, 15. The Swiftneſs of their Motion, 21. Why tranſpoſed in a Glaſs, 29. Why they move with us, 33. The fine Contexture of Images, 65. They affect the Mind when we ſleep, 67.
Imagination, the Cauſe of it, 65.
Iron, its Uſe, 217. How drawn by the Loadſtone, 311.

K

Knowledge derived from the Senſes, 45.

L

Lands, their firſt Diviſion, 205.
Leproſy, 319.
Light continually emitted from the Sun, 19.
Lightning, the Cauſes of it, 241. Is ſeen before we hear the Thunder, 247. Of what Seeds formed, 253. Paſſes through Bodies, 261.
Limbs not made for proper Uſes, 73.
Lion terrified by a Cock, 63.
Loadſtone, it's Nature and Qualities, 303.
Love, the Cauſe of it, 87. A Caution againſt it, 91. The Inconveniences of Love, 93. Its original State, 193.
Lover, a Deſcription of a paſſionate Lover, 91. Lovers are blind and partial, 97.
Luſt in Animals, 101.

M

Magnet, its Virtue, 305. Its Power of Attraction, 315.
Man, the Origin of Man and Beaſt, 183. The State of the firſt Men, 191.
Matuta, 169.
Meat, different to different Palates, 51.
Memory, 67.
Metals, their firſt Diſcovery, 215.
Meteors, their Cauſe, 243.
Mind moved by the Image of Things, 67. Purged by Philoſophy, 237.
Miſtreſs, the Extravagancy of keeping a Miſtreſs, 95. The Character of a Miſtreſs, 99.
Monſters, why thought of, 65. Their Production, 187.
Moon, how formed, 153. Is no bigger than ſhe appears, 163. She borrows

rows Light from the Sun, 175. Rolls round her Axis, 177. A Moon may be created every Day, 179.
Move, why we move as we pleaſe, 77.
Muſick firſt invented, 223.

N

Names, how firſt impoſed, 199.
Nature ſaid to make the World, 127.
Night, why it ſucceeds the Day, 169.
Nile, the Overflowing of that River, 289.
Noſe, in what Manner affected, 61.

O

Objects in the Light ſeen by us in the Dark, 35. The Eyes contract to ſee a ſmall Object, 71.

P

Palates, the Difference of them, 57.
Pan, his Office, 53.
Particles on the Surface of Bodies, 23.
Phaeton, his Fate, 147.
Phaſes of the Moon, 177.
Plagues, their Nature, 317. The Plague of *Athens*, 321.
Plays ſeem to be ſeen in the Sleep, 85.
Poem, the Method of it, 7.
Pores of unequal Size, 54.
Prodigies deſcribed, 17.
Præſters, their Nature and Cauſe, 267.

R

Rain, the Cauſe of it, 273.
Rainbow, how formed, 275.
Religion, the Original of it, 209.
Riding the Horſe firſt uſed, 217.

S

Scylla, no ſuch Creature, 189.
Sea, how produced, 155. It does not increaſe, 281.
Seaſons for Thunder, 263.
Seed, an Account of the Human Seed, 89. The Reaſon of its different Effects, 103.
Seeds, their various Sorts in the Earth, 293. Continually flowing from Bodies, 305.
Senſes, their Certainty, 37. Are not to be contradicted, 45.
Shadows, why move with us, 35.
Showers, how produced, 273.
Sight cauſed by the Images of Things, 25.
Skins, the firſt Garments, 225.
Sleep, Images in our Sleep deſcribed, 69. The Nature and Effects of Sleep, 79. Sleep when the Belly is full, 83.
Smell, the Nature of it, 61. Of what Seeds compoſed, 63.
Soul proved mortal, 107. The World thought endued with a rational Soul, 121. Soul cannot act without the Body, 123.

Sound

Sound explained, 49.
Sowing invented, 223.
Spinning firſt in Uſe, 221.
Sports rural, 225.
Stars ſeem to ſtand ſtill, 39. Why they move, 157. The Manner of their Motion, 159.
State, the original State of Mankind, 197.
Storms, the Cauſe of them, 273.
Subtlety of Images, 17.
Summer Solſtice, 167.
Sun ſeems to riſe out of the Sea, 41. An Account of its Light, 137. How it was formed, 153. Is no bigger than it appears to be, 163. Is the great Fountain of Light, 165. His Courſe particularly explained, 169. The Riſing of the Sun, 171.
Surface of Bodies affected by the Air, 81.
Swiftneſs of the Images, 21.

T

Taſte, the Nature of it explained, 57.
Tempeſt, the Cauſes of it, 255.
Think, why we think on what we will, 69.
Thirſt, the Cauſe of it, 75.
Thunder, the Reaſon of it, 243. The Force of it, 253. The Swiftneſs and Stroke of Thunder, 259.
Towers ſquare, appear round, 35.
Trees, when produced, 183.
Tremblings of the Earth, 277.
Tropicks of *Cancer* and *Capricorn*, 173.

U

Voice, an Account of it, 49. Particularly explained, 51. It paſſes through Doors, 55.
Uſe and Experience, 229.

W

Water, its various Changes, 135.
Wells, cold in Summer, 297.
Whirlwind, its Nature, 269.
Winds, the Occaſion of Thunder, 245. They burſt and drive the Clouds, 257. Are the Cauſe of Earthquakes, 277.
Words, the Formation of them, 49. Reverberated, 53. The firſt Uſe of Words, 201.
World not without Beginning or End, 117. Is mortal, 119. Is not an Animal, 123. Was not made for Man, 125. Not made by an intelligent Being, 129. Is of a new Creation, 141. It may be burnt, 147. How it began, 149. The Nature of its Infancy, 185.

Y

Youth, their Perſuit of Love, 87.

Z

Zodiack, 173.

JAN 31 1934